27th Congress, 2d Session.

Rep. No. 811.

Ho. of Reps.

LIGHT-HOUSE ESTABLISHMENT.

[To accompany bill H. R. No. 432.]

May 25, 1842.

Mr. J. C. Clark, from the Committee on Commerce, made the following

REPORT:

The Committee on Commerce, to which was referred the following resolutions, viz:

"*Resolved*, That the Committee on Commerce inquire into the expenditures of the light-house establishment since the year 1816, including expenditures for building and repairing light-houses, light-ships, beacons, and every work embraced under this general head, and make their report of the result of their inquiries; and, also, to examine into the propriety of reorganizing this establishment; of changing the mode of its superintendency, and equalising the compensation given to them and to the light-house keepers, and the keepers of other lights, buoys, &c., and the propriety of suppressing some of the posts of this establishment, and of so modifying the laws and practices under them, in reference to this establishment, as to secure strict observation of the duties of superintendents and keepers of lights; and to report the result of their examinations to this House, with such plans as they may agree upon, tending to reduce the annual expenditures of this establishment, and to improve the facilities and safety of navigation.

"*Resolved*, That the Committee on Commerce be instructed to inquire into the expediency of providing, by law, for a retrenchment of the expenditure and better regulation of the light-house department; and, also, whether the same ought not to be placed under the charge of the Topographical bureau"—

Report, that they have had the same under consideration, and have given to the subjects therein contained the deliberation which their importance justly demands.

The tabular statement (marked A) annexed, furnished by the Fifth Auditor, gives the information sought by the first clause of the first resolution.

The committee propose, in terms as brief as possible, to speak of our light-house establishment; of the cost of construction; comparative expense of different years; cost of construction, compared with that of British and French lights; expense of maintenance, in like comparison; efficiency of the lights; progress of improvement, &c. In a word, of all the matters referred to in the resolutions; and, first, as to the

ORIGINAL COST OF CONSTRUCTION.

The committee have gone no further back than to the year 1791, when the number of light-houses was only ten, and the entire expense of that year was $22,000. From that period to the present, the increase has kept pace with the rapidly growing commerce and navigation of the country.

The present number of		light-houses is - - - -	256
Do	do	light-boats - - - -	30
Do	do	beacons, without lights - - -	35
Do	do	buoys, about - - - -	1,000

The total cost of the light-house, light-boat, beacon, and buoy establishment, (including cost of sites, buildings, repairs, maintenance, &c.,) from 1791 to 1817, was (round numbers) -	$1,872,000
Do. from 1817 to 1841 - - - - -	7,216,000
Total - - - - - - -	9,088,000

Being an average per annum expense of about $180,000.

The total cost of building light-houses, (including cost of sites,) light-boats, beacons, and buoys, from 1791 to 1817, was -	$305,000
Do do do 1817 to 1841 - -	1,910,000
Total - - - - - - -	2,215,000
Deduct cost of beacons and buoys - - - -	500,000
Total for 286 light-houses and boats - - -	1,715,000

Being an average of about $6,000; showing, in the opinion of your committee, great economy in these constructions.* Probably truer economy would have been consulted by more liberal appropriations for these works, thereby adding to their solidity and permanency.†

COMPARATIVE COSTS OF DIFFERENT YEARS.

The amount of expenditure of any given year, compared with that of another year, will appear more or less depending on the number of new constructions, either of houses or boats, in the respective years, the amount of repairs, cost of oil, &c. Some seasons are noted for the frequency and violence of their storms; in such years the expense of repairs will be great. The tables furnished us, therefore, will only enable us to draw conclusions for or against the economy of the general expenditure.

The entire expense of 1841 was $474,000; showing a large proportionate decrease of that of 1791, when, with ten light-houses, the expense was (as before stated) only $22,000. Had the expense remained in the ratio of the increased number of lights, it would have been, in 1841, $643,000.

In 1820, the number of light-houses, &c., was fifty-five. The whole expenditure for the year was $244,000. It should have been $842,000 in 1841, if the increase of expenditure had been in the ratio of the increased number of lights. And so of 1835: number of houses, two hundred and one;

*The expense of beacons and buoys, from 1791 to 1819, was $267,783; from 1819 to this period, the expense has no doubt been greater, annually. During the latter period, the light-house and beacon and buoy accounts have been classed together, rendering it difficult to ascertain what the light house establishment proper should be charged with. An expense of $10,000 per annum for beacons and buoys, from 1791 to 1841, is no doubt small enough; making, in the aggregate, $500,000.

†Since writing this report, the committee have received, from the Fifth Auditor, the annexed statement, (marked B,) giving the number of light-houses built since 1820, and the cost of each. From this statement it appears that the average cost of these light-houses, including cost of sites, is less than $5,300. The expenditures are less than the appropriations for these erections, by more than $224,000.

From the statement furnished by the Auditor, annexed, (marked C,) it appears that the cost of the construction of 33 light-boats averages about $9,100, and that the expenditure for these constructions is less than the appropriations, by $59,000; showing an aggregate expenditure for these objects of $283,000 less than the appropriations.

expenditure, $382,000. The expenditure of 1841 should have been $549,000.

For the last four years the amount expended, in comparison with previous years, for the building of houses and purchase of sites, has been great; but not, in the opinion of the committee, greater than the requirements of navigation demanded.

From 1837 to 1841, the aggregate amount of expenditure for all purposes was $2,176,000. Of this amount, there was expended, in the same time, for purchase of sites and buildings, $533,000; being more than one-fourth of the whole expenditure ($1,992,000) for the same objects for twenty-five years, from 1816 to 1841.

This large increase of disbursements was the consequence of the legislation of Congress in 1837 and 1838, in which years a large number of lights were ordered to be constructed. No blame can be justly chargeable to any one, certainly not to the administrative departments. But the committee think these expenditures were reasonable. All the light-houses erected in these four years were necessary and proper. That all the houses built previous to 1838, with perhaps two or three exceptions, are necessary to the prosecution of a successful commerce, is shown by the report of Lieutenant Manning, and other officers of the navy hereinafter mentioned.

It has been hardly possible that an unnecessary light-house could have been built since 1837. In that year Congress, for the first time, very wisely directed the Board of Navy Commissioners to cause thorough examinations and surveys to be made, by competent officers of the navy, of all the sites proposed for light-houses mentioned in the act of the 3d of March, in that year. These examinations and surveys were made. (See Executive Document, 2d session 25th Congress, No. 41.)

It appears, from the report of the Commissioners, that thirty-one of the proposed sites, contemplating an expenditure of $168,000, were condemned.

By the act of July 7, 1838, section 5, it was enacted "that in all cases where appropriations are made in this act for the erection of new light-houses or new light-boats, to be established at places not before authorized by law, all such places shall first be carefully examined, and the most suitable sites selected," &c.

These wise precautions, worthy to be taken in all future legislation on this subject, as a general rule, preclude the belief that any light-houses have been constructed at improper points since the report of Lieutenant Manning and others, made in 1838. Since the act of that year, no new erections have been directed by Congress. The expenditures of 1839 and 1840 were in pursuance of that and previous acts.

It is hardly probable that the expense of any term of four years to come will equal that of the four past years. But a few new light-houses will be required on the Middle and Northern Atlantic coasts. The Southern, particularly the Florida coast, will need more. Thirteen light-houses have been erected in Florida, since its cession to the United States. For the last six years, the Indian war has prevented the building of any additional ones on the Atlantic side, although some have been authorized by law. When that war shall have terminated, the safety of navigation will no doubt be consulted by placing light-houses on some important and dangerous points in that quarter.

It is believed that, in usefulness, efficiency, and economy, combined, our light-house establishment will not compare with disadvantage with that of any other nation.

COMPARATIVE COST OF CONSTRUCTION.

From a report of the Secretary of the Treasury, made to Congress in 1836, (Ex. Doc. 1835–'36, vol. 3, No. 66,) it appears that the cost of light-houses in the United States is, on an average, $6,000; while in England they cost $19,000, and in France $8,000.

From a report of the Director General of France, (see report of select committee to House of Commons, August 8, 1834, appendix R,) it appears that the average cost of building 13 light-houses, &c., in 1832 and 1833, was more, by some hundreds of dollars, than the estimate of the Secretary.

The same report shows (page 7) that the average cost of 12 British lights, built from 1820 to 1834, also exceeds the calculation of the Secretary.

The average cost of sites and building 13 lights in Ireland, under the Dublin Board, for 1820 to 1834, is more than $65,000. (P. 74, ibid.)

From an estimate made by Mr. Fresnel, French Director of Lights, (Appendix R, ibid, p. 236,) it is shown that 31 lights, to be built in 1833, 1834, 1835, and 1836, would cost, on an average, about - $20,000
Do. apparatus, lantern, lamps, &c. - - - - 4,500
Of these 31, 18 were to be of the first order, and would cost, on an average, for sites and building - - - 27,000
Do. apparatus, lantern, lamps, &c. - - - - 5,500

EXPENSE OF ESTABLISHMENT, COMPARED WITH THAT OF ENGLAND AND FRANCE.

From a report of the Fifth Auditor, made to Congress October 1, 1835, it appears that the average expenses, per annum, of sustaining each light-house, including repairs, salaries of keepers, oil, &c., was - $911
Do. light-boats - - - - - - - 2,862
Do. light-houses in England - - - - - 2,268
Do. light-boats in England - - - - - 5,922

From the report of the select committee referred to, (page 30,) the average expense of each of the lights is as follows:

36 light-houses, England, under Trinity Board -	-	£511		
34 do Ireland -	-	500		
22 do Scotland -	-	514		
Average - - - - - - -		508	$2,450	
American, as above - - - - - -			911	
Difference in favor of American - - -			1,539	

EXPENSE OF LIGHT-BOATS.

13 boats, England - - - - -	£1,334		
3 do Ireland - - - - -	1,080		
Average - - - - - - -	1,207	$5,841	
American, as above - - - - - -		2,862	
Difference in favor of American boats - - - -		2,779	

From a report made by the Trinity Board, to which is intrusted the management of the British lights, made to the House of Commons in 1837, the expenses are thus stated:

42 light-houses, average expense	$2,610
13 floating-lights, do	8,381

For the year ending June 30, 1837, the expenses for the same services in the United States were as follows:

212 light-houses, average		$1,115
27 floating-lights		2,391
Average expense of British lights	$5,495	
Do. American	1,753	
Difference in favor of American		3,742

being more than 200 per cent in favor of American economy in this branch of the public service.

Besides, in England, commerce is heavily taxed, in the form of light money, by the owners and lessees of light-houses, for their own emolument, and for the support of pensioners and charities. There are fourteen light-houses thus owned. The promptings of individual sagacity and private interest will usually ensure the performance of any enterprise or the sustaining of any establishment with an economy much exceeding that used by agents of Governments. But the private lights in England are kept up at an expense much exceeding that of the United States.

Fourteen lights in hands of private persons in England, 1834:

Gross amount of collections		£79,676
Allowance for collection	£10,244	
Expense of maintenance	9,100	
		19,344
Profits		60,332

Average expense of maintenance £650,=$3,140; 180 per cent. more than American expenditure. (See same report, p. 37.)

The annual expense of maintaining private lights of the *first* class is much larger; being, on an average, $4,760. (Ibid, p. 41.)

The expense of the third (smallest) class of individual lights is (average) $2,490, being more than 120 per cent. more than the American lights, great and small.

This comparison is highly favorable to the economy of our system.

COMPARISON WITH FRENCH LIGHTS.

The report of the select committee referred to, (page 31,) states the annual charge of maintaining a lens light of the first order to be £340, say $1,640; but this is exclusive of repairs.

In all the French accounts of "expense of maintenance," repairs are excluded; so says M. Fresnel, principal engineer. (See ibid., appendix R.) M. Fresnel says: "These (the British) expenditures are found mixed up with each other, (that is, cost of maintenance and repairs;) hence the impossibility of arriving, with any degree of certainty, to a comparative estimate of the two services, (French and British.")

Our accounts are mingled in the same way; hence the like difficulty of instituting a comparison with the expenses of the French lights.

That the expenditure of the French establishment should be less than ours or that of Great Britain, would excite no surprise, when the relative cost of labor and oil is taken into the account.

The British committee, (page 31,) after commenting on the unequal expenditure in the maintenance of French and British lights, say: "In explanation of this difference, it must be observed—

"1st. Salaries to light keepers in England are understood to be nearly double those in France.

"2d. The price of spermaceti oil used in England is stated to be double to the oil de colsa used in France."

Wages in this country are much higher than in England even; and we also use sperm oil. Yet, notwithstanding the great inequality in the salaries of keepers and the cost of oil, it will appear, from the evidence furnished by M. Fresnel, that the management of our light establishment cannot justly be reproached with want of prudence and economy.

M. Fresnel says (see page 229, appendix) that the annual expenditure of a light of the first class (exclusive of repairs) is - - - - -	8,500 frs.	$1,615
The annual expenditure of a light of the second class (exclusive of repairs) is - - - - -	7,000 frs.	1,330
The annual expenditure of a light of the third class (exclusive of repairs) is - - - - -	3,600 frs.	684
Average - - - - - -		1,208

some 9 per cent. more than the cost of American lights, *including* cost of repairs.

The report (page 233) gives the expenditure of some of the lights specifically, from which it appears that the cost of maintenance is much larger than the above account of M. Fresnel, viz:

Cordovan light, of first order, ordinary annual expenditure - - - - - - -	11,598 frs.	$2,204
Expense of repairs - - - - - -		950
Total expense - - - - - -		3,154
Ushant light, first order, (page 235,) ordinary annual expenditure, (exclusive of repairs) - - -	9,000 frs.	$1,710
St. Mathieu light, second order, ordinary expenses, (repairs excluded) - - - - -	6,000 frs.	1,140

The average annual expense of these three lights (exclusive of repairs) is $1,685; exceeding, by 50 per cent., the average expense of American lights.

The most expensive American light is that on Frank's island, having two keepers, and, in 1841, amounted to $1,806 23, as follows:

Keeper's salary - - - - - - -	$600 00
Assistant - - - - - - - -	360 00
Oil, 779 gallons - - - - - - -	779 00
Tubes, glasses, &c. - - - - - - -	68 23
Window glass and putty - - - - - -	9 00

The average expense of the Cordovan and Ushant lights, both of the first order, was $1,957, being more, by $151, than the Frank's Island light.

The little experience we have had in this country in the use of the French lenticular apparatus induces the belief that our anticipations in regard to the saving of oil will not be fully realized.

The two lights on the lens plan, at Neversink, consume per annum 1,095 gallons of oil; they consumed, on the old plan, (thirty-one argand lamps,) 992 gallons of oil.

This consumption of oil is about the same as that of a lens light of the first order in France.

It is said in the report (ibid, page 32) that "the consumption of oil in the Cordovan light-house is equal to that of seventeen argand lamps." The average consumption, per annum, of such a lamp is thirty-five gallons, which gives to the Cordovan light a consumption of 595 gallons per annum; being 9 per cent. more than that of one of the Neversink lights.

The French manufacturer of the lenticular apparatus claims for it a great saving of oil. Further experience in this country may demonstrate the reality of this claim. But it remains to be proved to what extent, if any, such saving may be carried.

The communication of M. Lepaute, the manufacturer, to Governor Davis, (see Senate Doc. 1st sess. 26th Congress, No. 474,) in which he attempts to show the difference in the consumption of oil in the French and American lights, does not inform us on what authority the quantities of oil consumed in the American houses are given. With the best intentions to give the quantities correct, he may not have been in possession of the true account of them.

He puts down the quantity consumed at the two Neversink lights, under the old plan, at 1,135 gallons; but the amount consumed was 992 gallons only—a mistake of 15 per cent. in favor of his statement. He also puts down for the use of lens lights, at that place, 800 gallons, but we consume in them 1,095—a mistake of 37 per cent. in favor of the lens lights. The two mistakes, combined, show more than 50 per cent. in favor of the lenses.

In like manner he puts down the consumption of oil at Frank's island light, at the mouth of the Mississippi, at 1,050 gallons, but the true amount is only 779 gallons—an error of 35 per cent. Should the same errors extend through the whole of his table, (and the committee have examined these two cases, being the only ones before them showing the actual quantity of oil consumed,) the result, as stated by him, will hardly bear close examination.

It has been said that the French lights are superior to those of any other nation. Their sea lights are no doubt excellent. They have kept pace with the march of science and the improvements of the age; but it is doubted whether their claim to any considerable degree of superiority can be successfully maintained.

The British select committee (ibid, p. 31) say "the British lights are considered generally very good, and sufficient for the purposes they are intended for, and superior to the generality of French lights, many of which are harbor lights, and, perhaps, small in comparison with the sea lights."

PROGRESS OF IMPROVEMENT IN AMERICAN LIGHTS.

Previous to 1810, the then common lamp was used in all our light-houses; the lanterns were glazed with common glass, of no great purity. In consequence of the small size of the panes, the number and bulk of the sash obscured much of the light. The smoke from the lamps, soiling the glass, added much to the obscurity; besides, the consumption of oil in these antiquated lamps was enormous.

In that year, Mr. Winslow Lewis, a shipmaster thrown out of employment by the embargo in 1807, and who, from that year to 1810, employed his time in experiments with a view to improve the condition of our light-houses, was authorized by Government to place the reflectors of which he was the patentee in the Boston light-house. The consequent improvement in the character of the light, and the economy of expense in the saving of oil, were subjects of high commendation by the Government. (See State Papers, vol. 10, p. 879, &c.) A committee of the Boston Marine Society examined the Boston light; their report (ibid, p. 882) says that the light was visible at the distance of eleven leagues; that the new could be seen a distance of five leagues further than the old light; and that the saving in oil was equal to 200 per cent. In the same year, one of the light-houses on Thatcher's island was fitted up in the same way. Mr. Dearborn, the collector of Boston, examined it, with others, minutely, in comparison with the other light, burning on the old plan. He says, in his letter to Mr. Gallatin, (ibid, p. 880,) that at the distance of seven leagues the contrast between the two lights was striking—the one as a "large brilliant star" to a "small star;" and that there was a saving of oil equal to 100 per cent. Again: in speaking, under date of June 27, 1811, of Boston and Cape Cod light-houses, (for the latter had been fitted up with the new lamps,) he says that the light can be seen at a much greater distance than the old lights, and requires less than half the quantity of oil. The saving of expense in oil in these three light-houses was not less than $1,900 per annum.

The success of these new lights was so complete that Congress passed, in March, 1812, an act authorizing Mr. Gallatin to contract with Mr. Lewis for fitting up all the light-houses (49) on the improved plan. The contract was accordingly made on the 26th of March of that year, Mr. Lewis giving bonds, in the sum of $60,000, conditioned that the new lights should be better than the old, and that one-half the expense in oil should be saved. All the light-houses were not completed until in the fall of the year 1815, when the contract was fulfilled, to the entire satisfaction of the Government. The commissioner of the revenue, Mr. Smith, then general light-house superintendent, in a letter dated January 17, 1817, (State Papers, vol. 11, p. 44,) says: "The fidelity with which Mr. Lewis is understood to have fulfilled his engagements, added to the experience which he has acquired, recommends himas the most elegible organ for the continued performance of these services"—(fitting up new light-houses with patent lamps and reflectors.)

On the 1st day of January, 1816, Mr. Lewis contracted with the Government to furnish best sperm oil for all the lights for seven years, and to visit every light-house personally once a year, and report its condition to the proper bureau, in consideration of being allowed annually one-half the oil consumed under the old plan. It was renewed at its expiration for five

years, for only one-third of the oil. These contracts were faithfully executed.

Since 1828, Mr. Lewis has been extensively engaged as a contractor for building light-houses for the United States. His intimate acquaintance with and practical knowledge of the business has enabled him to become a successful competitor for building many of them, since that period. About eighty of them have been constructed by him. It is believed by the committee that he has been faithful in the discharge of all his engagements to the public. To his active exertions our light-house establishment is much indebted for its present highly improved condition.

Within a few years past, further improvements have been made, in the size and quality of the reflectors, and the quality of the glass with which the lanterns are glazed. The 21-inch improved parabolic reflectors are made in this country, at an expense, including the lamps, of eighty dollars, in dies or moulds, (instead of being hammered, as formerly,) plated with 16 ounces of silver, and highly polished. The lanterns are improved by substituting for panes of common glass, 8 by 10 or 10 by 12, plate glass, 20 by 24 inches.

In 1839, the Boston and Cape Cod lights were fitted up with these reflectors.

In 1840, Faulkner's Island, Stonington, and Tybee beacon-lights, ditto.

In 1841, Thatcher's Island, (two,) Scituate, Chatham, (two,) Newport, Cape Henry, Old Point Comfort, New Point Comfort, Wolf Island, (two,) Thunder Bay, and White Island, ditto.

The cost of fitting up a house with a new lantern, with 15 lamps and 15 21-inch reflectors, is about $3,500.

The cost of fitting up a house with 10 lamps and ten 14-inch reflectors about $2,000. (See statement annexed, marked D.)

These improvements have added to the ordinary expenses of the establishment, since 1839, about $50,000. It is the intention of the superintendent to fit up all the principal light-houses in the improved style, when the condition of the Treasury will warrant the expense—a purpose which meets with the approbation of the committee, as they doubt not that thereby the brilliancy and efficiency of the lights will be still further increased.

During this season, it is proposed to refit only two lights, viz: Charleston and Tybee.

A few years previous to 1830, a new mode of lighting was introduced into France, the merit of which is said to be due to Dr. Brewster, though it was, about the time of its invention, adopted in France by M. Arago and M. Fresnel. It is called the lenticular or dioptric, as contradistinguished from the catoptric plan. The former, by the aid of lenses, refracts, the latter, by reflectors, reflects the light. For a particular mention of this plan and apparatus, see Gov. Davis's report, (Sen. Doc. 1837–'38, vol. 5, No. 428;) also, select report to House of Commons, (p. 321.)

In 1830, the Fifth Auditor, anxious that the country should avail itself of every improvement calculated to give efficiency and economy to the system, wrote to our consul at Paris, Mr. Barnet, to be informed of the merits of the invention. He was answered, that it was (then) yet considered an experiment in France, and he was advised to await its results. At a subsequent period he again wrote in regard to the cost, and was answered that a first order lens light would cost $5,000 and a third order $2,000. The great difference in expense, compared with the merits of

the two plans, prevented the superintendent from giving order for their introduction into this country. Nothing more was done until 1838, when the attention of Congress was called to the subject by the report of Governor Davis. An act was passed July 7, 1838, authorizing the purchase and importation of two sets of this dioptric apparatus—one of the first and one of the second class. The purchase was made, and they were put into operation in the two Neversink light-houses not far from Sandy Hook, in March, 1841. (See letter of Auditor, marked, E.)

The whole expense of purchase, transportation, and fitting up, exclusive of work on the towers, was about $10,000 each—a cost much greater than that for which they might now be completed. Congress, and those more nearly interested in commerce, were anxious to try them. To prevent any failure, the Fifth Auditor employed a competent man at Paris to come over and put them in operation. They were unknown in this country, and it was believed that no one here was capable of arranging them correctly. (For a more particular account of this matter, see the letter of the Auditor, marked E.)

It is not believed that dioptric lights of the first order can be required at any points, except a few, and those the most important outer sea stations. The remarks hereinafter made in regard to the comparative efficiency and economy of French and American lights, and the letter of the Auditor, may suggest doubts of the propriety of using any of the first order.

The British select committee, in their report, (page 32,) say "the consumption of oil in one of those (largest French) lenses renders its use not advisable for light-houses where a small number of burners suffice."

Those of the third and fourth order, the former having a portee of fifteen and the latter of ten miles, may be found after due trial worthy the patronage of the Government.

The Fifth Auditor recommends the purchase of one set of the third order, to be tried in the Long Island Head light, in Boston bay. The whole cost will be about $4,500. The committee recommend an appropriation of that sum for that purpose.

In arranging lights, useful effect and expense should be looked at in one view. An outer or sea light should have a "portee" or reach of light sufficient to give the approaching vessel, in all weather, timely notice of danger. Any expense in fitting up lights to produce more effect is useless. A light extending its limit of visibility to the distance of twenty-five miles is as efficient and useful as one of greater range. The mariner sees it in ample time to shape his course, free from all difficulty.

COMPARISON OF AMERICAN AND FRENCH LIGHTS, IN REGARD TO REACH OF LIGHT.

FRENCH.

1st order, average portee about				6⅔	leagues—	20	miles.
2d	do.	do.	do.	do.	6	do.	18	do.
3d	do.	do.	do.	do.	5	do.	15	do.
3d	do. (small)		do.	do.	4	do.	12	do.
4th	do.	do.	do.	do.	3	do.	9	do.
Harbor and watch lights					1⅔	do.	5	do.

1st order,	27, viz:	2	of 9	leagues	portee,	27 miles.
		3	8	do.	do.	24 do.
		4	7	do.	do.	21 do.
		18	6	do.	do.	18 do.
2d order,	2,	2	6	do.	do.	18 do.
3d do.	8,	8	5	do.	do.	15 do.
3d do. (small)	3,	3	4	do.	do.	12 do.
4th do.	34,	34	3	do.	do.	9 do.
Harbor lights,	32—	19	2	do.	do.	6 do.
		3	2½	do.	do.	7½ do.
		4	1½	do.	do.	4½ do.
		5	1	do.	do.	3 do.
		1	½	do.	do.	1½ do.

Whole number, 106.

Average of the whole, say 14 miles.

Average of 1st, 2d, 3d, (small,) and 4th orders, say 15 miles.

The committee are unable to give the reach of visibility of all the light-houses in the United States. The limits of those which have been ascertained warrant the conclusion that they are, on an average, larger than the French lights.

Professor Paine, of Cambridge College, in 1838, made a survey of twelve light-houses in Boston bay and vicinity. (See House Report, 3d session 25th Congress, No. 187.) He says: "I therefore feel myself warranted in drawing the following conclusions: that, in ordinary clear weather, our best lights, such as the Boston, Highland, Scituate, &c., are visible from the mast-head of a square-rigged vessel about 25 miles; that our second class of lights, such as those on Thatcher's island, Eastern point, the high light on Baker's island, and those on Plum island, are visible 20 to 22 miles; and that the third class, such as those at Straitmouth island, Ipswich beach, Squam, Marblehead, and Long Island head, are visible from 15 to 18 miles."

Lieutenant Bache, in his report, to which reference has been made, gives the ranges of visibility of fifteen lights, varying from 19 to 12 miles, and averaging 14 miles. Of these lights, 8 were of the third class, having only 9-inch reflectors; 5 of the second class, having 14-inch reflectors; and 1 of the first class, with 18-inch reflectors.

Mr. Lewis gives a statement of the portees of all the lights of the first class, from Passamaquoddy to South Pass entrance of the Mississippi, in November, 1839, ranging from 15 to 30 miles, and averaging 24 miles. (Senate Doc. 1837–'38, vol. 2, No. 138.)

Mr. Frick, superintendent of lights at Baltimore, gives the portees of 12 lights in the Chesapeake, ranging from 10 to 20 miles, averaging 15 miles. (Ibid.)

Mr. Anderson, superintendent at Portland, Maine, says that 15 harbor lights in that vicinity can be seen from 12 to 18 miles. These are not intended to be seen at sea. Also, that 12 coast lights in the same vicinity can be seen from 5 to 10 leagues. (Ibid.)

It appears, from a list of the light-houses published by the superintendent in 1839, that the average "reach of light" of 76 light-houses (that being the number whose reach is given) is 19 miles. The average "reach" of 6 of our best lights (Neversink, Montauk, Baker's island, &c.) is 27½ miles.

The committee believe that the statements of average distances of extreme visibility made by Professor Paine is true in regard to all our lights.

The average reach of light of 170 British lights, as shown in the British list published at the Hydrographical Office, Admiralty, in 1832, is less than 14 miles. The average reach of 6 of their best lights (Needles, Beachy head, Lundy, &c.) is 28½ miles.

The list of American lights is made out by the superintendent, in close imitation of the British lists. It gives the name of the light and State, place in which situated, latitude and longitude, number of lamps, size of reflectors, character of the lights, time of revolution, (if a revolving light,) reach of light of a part, height of lantern above high-water mark, height of towers from base to lantern, year in which built, and remarks.

It seems to the committee that the information contained in this list is as full and perfect as it well can be. That a few mistakes may be found, is probable.

In addition to the evidence furnished by the lists of British and American lights, in regard to their comparative reaches of light, the documents of the House last referred to contain the testimony of many highly respectable shipmasters, proving that our lights are in no wise inferior to the British. These masters were old seamen, who had from eight to twenty years been constantly employed in making voyages to England and France. All agree that our lights can be seen as far and as distinctly, and that our establishment is as well regulated, as that of any European nation. That document contains the charges then brought before Congress against the establishment, and, in the opinion of the committee, their triumphant refutation.

The Boston Marine Society, under date of January 2, 1838, *Resolved*, "That, in its opinion, the general character of the lights on this coast is good, and that much credit is due the Department under whose superintendence the light-houses are placed, for the good order which the light-houses now evince, and the exertions to maintain efficient lights."

If our establishment is wanting in order and efficiency, it might be supposed that we should hear complaints from those who travel, by night and by day, on the perilous highways, made comparatively safe by the light which it throws upon them. The committee are ignorant of any complaints from that quarter. The captains of our ships and packets, men having the nearest interest in and most competent to speak of the subject, send us no memorials in complaint.

Out of door faultfinding, coming from those who have never trod a deck, and perhaps from some who, in their great zeal for change, and by their attendance upon the lobbies of Congress, subject themselves to the suspicion that personal and private considerations, and not the public good, stimulate them to action, should be listened to with distrust, and taken with much allowance. When the masters and owners of our commercial marine shall lay their complaints before Congress, and ask for improvements in our public lights, the time will have arrived when the question of reform should be thoroughly discussed.

In comparison with the progress of improvement in the Old World, our march in this, as in almost every other useful establishment, has been extremely rapid. In the comparatively short period of fifty years, we have built 276 light-houses and boats. Since 1812, the useful effect of our lights has been nearly doubled, and the consumption of oil lessened by more than

50 per cent. For centuries before our existence as a nation, England and France had been commercial nations; but, up to the close of the last century, no improvement had been made in the quality of their lights. About that period, oil was substituted for coal. At the close of the year 1812 we had 40 light-houses fitted up with patent lamps and parabolic reflectors. At that time, both England and France had not 10 houses thus fitted up.

It is believed that, when the improvements now in progress shall have been effected, (in connexion with a proposed change in the mode of inspection,) our system will be more efficient, useful, and economical, than that of any other nation.

ORDER, MANAGEMENT, AND LOCATION.

It is understood that but few complaints are made, by those most immediately interested, touching the management of the lights by their keepers. In an establishment so vast and widely extended, that there should be occasional delinquency is to be expected. It must be viewed as a whole. That a few bad light-houses and bad keepers may be pointed out is quite probable; but this proves nothing against the general goodnes of either, or the general correct management of the system.

The report of Lieutenant Manning and others, officers of the navy, (Ex. Doc., 3d sess. 25th Con., No. 24,) shows that, generally, the lights were well conducted, and that the lighting apparatus was in good condition. Many of the *houses* were out of repair. This will and must be the condition of some of them every year. They are much exposed to the violent action of the elements, and are liable to get out of repair.

Under the act of July 7, 1838, the Atlantic coast was divided into six and the Northern lakes into two districts; to each of which was assigned a lieutenant of the navy, who were, in pursuance of said act, instructed by the Secretary of the Treasury to make inspection of all the light-houses and boats, buoys, beacons, &c., in their respective districts, and to report upon their condition and usefulness; and, also, further to report whether, in their judgment, the public interest requires any modification of the system of erecting, superintending, and managing said light-houses, light-boats, &c.

The first district, extending from Eastport to Boston, was assigned to Lieut. Manning. He examined forty-one lights, the whole number in his district. He reported them, with the exception of three or four, some "in order," some "in good order," and others in "very good order." He says that there was a general complaint by the keepers that the oil was bad, on the ground that it congealed in cold weather. In a cold climate, this is unavoidable, unless oil heaters or stoves are used. The best of oil will become hard when the thermometer (Farenheit) is down to 34.

Lieut. Manning, although he does not recommend the discontinuance of a single light-house, by name, as unnecessary, says: "It *may* be that all the lights on the coast of Maine are required, but I should suppose that some of them might be dispensed with." That was the object of his visitation, and it is to be regretted that he did not ascertain what lights, if any, should be extinguished. He, however, as an apology, complains that he had not sufficient time to make the necessary observations. If mariners become confused, owing to the multiplicity of lights, it is presumed that either Congress or the Department will be informed by them of their com-

plaints, and made acquainted with proposed remedies. The committee are ignorant of the existence of such complaints.

The second district, from Boston to Newport, (28 houses) was inspected by Lieut. Carpenter. He reported eleven of them as being badly kept. They must have improved greatly since. Governor Lincoln inspected five of them in 1841, viz: Scituate, Barnstable, Mayo's Beach, Cape Cod, and Nauset; and Mr. Collector Norton one—Nantucket harbor. They report them in fine condition. In 1840, Mr. Knowlton (who visits the houses annually, to deliver oil, inspect them, and make any necessary repairs to the light apparatus) inspected Scituate, Plymouth, Mayo's, Cape Cod, and Chatham lights, (the latter being one of the eleven reported by Lieut. Carpenter,) and reported them to be in good order. He also reported the same of Cutterhunk, Dumpling Rock, and Clark's Point, which had the ill luck to come within Lieut. Carpenter's condemnation.

Lieut. Carpenter reported many of the houses out of repair. As before remarked, repairs are yearly demanded in a greater or less degree, and always will be, under any administration of the system. Since that report, extensive repairs have been made, and will continue to be made, so long as light-houses must be placed in highly exposed positions.

He recommended a reduction of the lights in nearly all the houses, and a different arrangement and coloring of many of them. His suggestions in regard to some of the lights may be judicious; but a general change in the arrangements of the lights on that important portion of our coast would seem to be improper, and might lead to many disastrous results. Every mariner, competent to take charge of a vessel, is familiar with the position, bearing, number, color, and character of the lights. A general change in their arrangement would lead to much uncertainty and confusion, and, while the mariner was learning to distinguish them, an immense sacrifice of life and property might be the result. That Lieut. Carpenter performed his duties with an honest zeal, the committee do not doubt. His report shows that he was deeply imbued with the spirit of the age—change.

In this connexion, the committee refer to the opinions of the collector of Portland, and other collectors, and of many citizens in this district—Lieut. Manning's. (See paper marked F, annexed, and accompanying papers.) Seventeen citizens, being shipmasters, owners, and interested in navigation, state "that there are not too many lights on the Eastern coasts, but that they are of opinion that more light-houses might and ought to be located in several places and harbors along the coasts, now of difficult and dangerous access in dark and stormy nights; and some of us, masters of vessels, having sailed on the coasts for a long time, know from experience the want of lights in several places that we now have in our mind's eye." The collectors of Portland, Kennebunk, Frenchman's Bay, York, Waldoboro', Saco, Machias, *Wiscasset*, *Bath*, *Passamaquoddy*, and Castine, all agree that no one light can be dispensed with, and that they are sufficiently distinguished.

Captain Walden, of the revenue cutter Morris, states that Hendrick's Head and Pemaquid Point lights are useless.

Captain Whitcomb, of the cutter Alert, is of opinion that Bear Island or Mount Desert light might be dispensed with.

The force of these opinions is much weakened by the combined testimony of all the collectors, that *none* of the lights can be dispensed with. The collector at Bath differs from Captain Walden specifically, in regard to the

Hendrick's Head light, He says: "It seems to be universally conceded that it could not now be discontinued without serious consequences resulting." The collector at Wiscasset examined particularly this light-house, and says that it is useful. The collector at Belfast thinks that the light is important to vessels going into Sheepscot river.

This collector also differs from Captain Whitcomb in regard to Bear Island light, and refers to the opinion of Captain Doyle, who, in his last voyage from Eastport, would have lost his vessel, with a valuable cargo, had it not been for this light.

The weight of testimony is decidedly in favor of all the lights.

The letter of Captain Sturgis, of the revenue cutter on the Boston station, is also annexed: He says "that, from twelve years' personal observation, the light-houses on the Eastern coast are properly located; and that they are the dependence of the immense coasting navigation of this section of the Union; and that he is surprised that any person should assert that there were too many, or that any number could be discontinued without great hazard to commerce."

Captain Sturgis also bears strong testimony in favor of the ability and faithfulness of the keepers. The report of a committee of the Boston Marine Society, appointed at a special meeting of the society, held on the 8th of April, 1842, is also annexed. The committee had before them the complaints and charges of a Mr. J. W. P. Lewis, against our light-houses. The committee report that "they feel warranted in expressing an opinion that the lights generally on the American coast have been much improved, and that they are in a better condition now than they ever have been before."

In regard to the number of light-houses on the coast of Maine, the committee say that "they have sought for information on this subject from various persons well acquainted with the navigation of that coast, (among them are commanders of vessels and pilots,) and all with whom they have conversed have expressed an opinion that the lights are not too numerous; that none can be well dispensed with, and that they are in good and satisfactory condition.

The committee have examined the reports of the collectors, acting as superintendents, of their inspection of the lights in their respective districts, made in 1841. With a very few exceptions, these reports speak in terms of commendation of the good order and management of the lights, and of the lamps and apparatus connected with them. The remarks of Governor Lincoln, in his report, will apply to all these reports. He says, "upon a review of his report, that the light-houses in his district are, in the general, in good condition and well kept."

Lieutenant Bache inspected the third district, from Newport to New York, and up the Hudson, (34 lights.)

He complained of only four light-houses as being badly kept.

The fourth district, from New York to Norfolk, (52 lights,) was inspected by Lieutenant Porter.

He reported only four light-houses as being improperly kept.

Lieutenant Hollins inspected the fifth district, from Norfolk to Key West, (29 lights.) He reported all of them kept in good order, and many of them in excellent order, except three—North Island, Cumberland Island, and Northwest Passage light-houses, and Wade's Point light-boat.

The sixth district was examined by Captain Rosseau, and the seventh

by Lieutenant Homans. Their reports were equally favorable. In the opinion of the committee, these reports furnish no proof against the general good management of the establishment.

In the location of some two hundred and twenty light-houses, (about the number in 1838,) it might have been expected that some of them would have been placed at points furnishing no aids to navigation, and involving in their construction unnecessary expenditure. The only surprise is, considering the information on which Congress had from time to time authorized these erections, that many, very many, of the light-houses are not only useless, but worse than useless. Previous to 1837, the information on which Congress acted consisted of allegations and statements set forth in petitions and memorials, often, no doubt, prompted by local considerations and individual interests, and communications from the Treasury Department, founded on the best knowledge within its reach. This was necessarily imperfect, as previous to that period no examinations or surveys were directed to be made by scientific and competent officers of the Government.

In the report referred to, but three lights, specifically, are recommended to be extinguished. Lieutenant Carpenter recommends the abandonment of two of the towers at Nauset beach, Massachusetts, and to substitute one red revolving light for three fixed white lights. The erection of these three towers was, upon examination and survey, under the act of March 3, 1837, strongly recommended by Captain Percival, of the navy. (See paper annexed, marked G.) Which of the reports is most to be relied on, that of Lieutenant Carpenter or of Captain Percival, the committee have no means of ascertaining. Neither Congress nor the Department are in fault for constructing these lights, should the report of Lieutenant C. prove to be correct. *Lieutenant C. thought the Mayo's Beach light was unnecessary.*

In Lieutenant Bache's district, he found but one light, (Poplar Point,) of the general usefulness of which he entertained a doubt. He admits that it is serviceable to the trade of North Kingston and Wickford.

Lieutenant Porter says "the present sites for light-houses in the fourth district have been judiciously selected."

SUPERINTENDENTS AND KEEPERS, AND THEIR SALARIES—INSPECTORS.

Forty-four collectors act as superintendents of the lights in their respective districts. By the act of May 7, 1822, their maximum compensation per annum is $400. Some four or five receive that amount; the others receive from $100 to $200 each, per annum. These superintendents are required to visit the light houses but once in each year. Captain Howland, who is in the employ of the Department, also visits them once in each year, and makes reports of their condition, &c., to the Fifth Auditor.

In the opinion of the committee, there should be established a plan of inspection more efficient. Frequent visitations and minute examinations, by competent inspectors, would ensure vigilance, economy, and order, on the part of the keepers. The inspectors should be men thoroughly acquainted with all the details of light-house management and superintendency, with the manner of adjusting the lamps and reflectors, and of keeping them in good order.

Frequent reports from them to the general superintendent would enable

the latter to judge of the faithfulness and ability of the keepers, of the amount of the necessary repairs, of the quality of the oil consumed, of the quality of the lights; in a word, with all the minutiæ of the establishment.

The collectors, acting as superintendents, cannot possess that information and practical knowledge necessary to a perfect administration of the system. The mode of conducting it has formed no part of their studies. They lack both theory and experience.

In a report made to the Senate, from the Committee on Commerce, by Governor Davis, in 1838, (see Sen. Doc. vol. 5, 1837–'38, No. 428,) this subject is noticed. He says: "The lights should be visited by a general inspector, who is master of the whole subject, being fully capable of estimating the true character of the apparatus, its condition, the manner in which it is managed, whether the keepers are capable and faithful, and whether the oil is such as it should be. In short, this visiter should be so thoroughly skilled in every thing pertaining to the subject, as to keep the light-houses in as perfect a condition as the arts and the progress of science will allow." Again: "We have already said certain collectors of the customs are the inspectors of the light-houses in their respective districts. It is manifest the two offices have no natural connexion; for they require qualifications quite different. The one should understand the laws of light, as it is affected by reflectors and refractors; the other, the character and the value of merchandise; and there is no affinity between the employments; nor does it follow that one who is well qualified for a collectorship has a particle of that information which is essential to a well-conducted system of lights." Again: "The number is great; the duty is merely collateral; their visits are seldom; their attention little engaged in the matter. They have no control over the system, have no knowledge beyond their districts; and the consequence is, that their inspection is generally of little importance, and has little tendency to expose the faults or improve the character of the system. Indeed, so necessary is some other inspection, that the contractors who furnish oil are required to view and report upon the condition of each light; and so also are the immediate keepers. The subject was early committed to the collectors, as a matter of convenience; but we may well inquire now whether its importance does not call for a more skilful supervision—one that can give harmony and character to the whole system, and make it not only keep pace with the progress of population and business, but with the advancement of mechanical and scientific improvements."

In the opinion of the committee, these views are entitled to the respectful consideration of Congress.

The appointment of inspectors, whose duty it should be to devote their entire time, under the direction of the general superintendent, to frequent examinations of the light-houses, light-boats, buoys, &c., would be attended with no great increase of expense. The amount now paid to the collectors acting as superintendents is about eleven thousand dollars. There is already attached to the establishment a small vessel. That, with the addition of another, and the salaries of two inspectors for the two districts on the Atlantic coast, bays, &c., if two should be deemed necessary, the increase of expense will be inconsiderable. The frequent reports of these inspectors to the general superintendent would enable him at all times to know the precise condition and order of the establishment, and to increase its efficiency, usefulness, and economy.

The resolution directs an inquiry into the propriety of equalising the pay of the superintendents and keepers. From what has been said in regard to the pay of superintendents, it is manifest that their salaries are moderate, and that they are distributed in proportion to importance and service. The same remarks are equally just, applied to the salaries of the keepers—the lowest being $350, and the highest $600. These are fixed by the Secretary of the Treasury, under the act of May 23, 1828, by which he was authorized to allow such compensation as he should think proper, having reference, of course, to the relative amount of service, not exceeding an average of $400.

The salaries of keepers of floating lights were fixed by act of 26th of May, 1824, for those at sea, $700; and those on the bays and sounds, at $500—a compensation, in the judgment of the committee, not unreasonable.

From July, 1820, when the number of light-houses was 55, to the present year, when the number of light-houses is 256, of light-boats 30, of beacons about 35, and of buoys nearly 1,000, the establishment has been under the charge of the present general superintendent, the Fifth Auditor of the Treasury. It might well be expected that a twenty-two years' service would have given to the incumbent an experience and a practical knowledge of his business, which should not, for slight causes, be lost to the public. A transfer of his duties to other and inexperienced hands could not but be attended with derangements, and, probably, with an increased expenditure. It has now a good degree of method, system, and economy; and with some improvements, particularly in regard to inspection, it is believed that our establishment may, with no disadvantage, compare with that of any other nation. Every innovation is not an improvement. When an old and well-tried system works tolerably well, change and experiments should be avoided. More time and further experience will furnish correctives far better than any which may be anticipated from a change of system and a displacement of those who have thus far given that system a claim upon the confidence of the country. That complaints, to some extent, have been made, is true; and that complaints would be made occasionally, under any mode of administration, is equally true; but, taking into the account the magnitude of the establishment, the multiplicity of its details, and the large number of agents necessarily in its service, it seems to the committee that it merits no little commendation. In the opinion of the committee, a transfer of the duties of the Treasury Department, imposed by law in regard to our light-house establishment, is not called for by the public good.

The committee, however, have been instructed, by resolution, specifically to inquire whether the "light-house department ought not to be placed under the charge of the topographical bureau."

The construction of all our public works, up to 1838, was confided to the engineer corps of the army. In that year (August 23) twelve of these works were transferred to the topographical corps. In 1839 (January 22) fifty-five were also transferred; and one, the Delaware breakwater, was transferred in June of that year. No appropriations of any consequence having been made for the prosecution of the public works since 1838, but little work has been done or money expended on them since that period, or since they have been placed in charge of the topographical bureau.

In what manner the administration of our public works will hereafter

be conducted, (if indeed any further progress in them be authorized by Congress,) by the corps to which they have been transferred, remains to be seen.

If the same errors of calculation, want of economy, delays, and mismanagement, which characterized the proceedings of the old engineer corps, find place in the administration of the new, Congress should long hesitate before it consigned to its care any portion of the public works, and the vast expenditure of money attending their construction.

With a view of enabling the House to judge of the propriety of making the suggested transfer to the engineer corps, the committee have prepared a statement of the estimates and expenditures of many of our public works. (Statement annexed, marked H.)

This statement should be taken in connexion with or as a supplement to a report of the Committee of Ways and Means on the same subject. (See Reports of Committees of the House, 1835–'36, vol. 1, No. 297.) A comparison of these estimates with the expenditures may suggest doubts whether light-houses or any other public works should be committed to the guardianship of men who, however scientific, seem to have wanted judgment, tact, and just notions of economy. It is to be hoped, if the old works are to be completed or new works are to be commenced, that the topographical bureau may profit by the experience of their predecessors, and avoid their errors.

In a report recently made by this committee, in regard to the light-house on Flynn's Knoll, &c., they referred briefly to the manner in which money had been expended on the public works, and spoke of what the country had a right to expect from their management, under the direction of the topographical bureau. When the prudence and efficiency of such management shall have been satisfactorily developed, it will be in time to consider the propriety of transferring to it the charge of our light-house establishment; until then, the committee are of opinion that the superintendence of that establishment should remain unchanged.

From the statement referred to, it appears that the original estimate of cost of twenty-three public works was - - - - $735,000
That the actual expenditure has been - - - - 2,382,000
And that the estimate to complete seventeen of them is - 1,933,000
Showing that the expenditure exceeds the original estimate by more than 220 per cent.; and that the expenditure and the estimates to complete exceed the original estimates by more than 480 per cent.

The committee have referred to the estimates and expenditures on our public works, for the purpose merely of enabling the House to judge whether it would be proper to commit the light-house establishment to new hands.

The committee would cast no censure on the policy which prompted the construction of harbors, breakwaters, and clearing of rivers from obstructions. They have promoted, and will, under the fostering care of enlightened statesmen, continue to promote, the great interests of commerce. They indulge the hope and belief that, whenever the condition of the public Treasury will warrant the expenditure, our artificial harbors, on which so much money has been lavished, and nearly all of which are now fast going to ruin, will be permanently completed; and that new works in many portions of the country, imperiously demanded by the wants of navigation, will be *thoroughly* constructed. If any inducement were

wanting, to hasten the pace of the patriot towards the goal of our real independence—an independence of foreign luxuries and foreign workshops—it may be found in the dilapidated condition of our public works, and in the pressing calls from many parts of the country for new safeguards to life and property, exposed, in the prosecution of doubtful voyages, to the fury of the elements on the ocean and the lakes. The committee believe it to be the part of wisdom to fill the public Treasury with money levied in the shape of a tax on the consumers of foreign produce and manufactures coming in competition with ours, sufficient for all the purposes of a prosperous commerce, of international communication, and national defence. Then protection (a word often used "to frighten men from their propriety") will mean something more than a mere temporary aid to domestic manufactures. By raising revenue in the manner and for the purposes indicated, our ships, freighted with the rich products of our soil, will find protection in safe and commodious harbors and breakwaters, our national peace and honor will find protection in a well-appointed navy, in forts and steam batteries impervious to assaults, and our liberties will find protection in the hearts and hands of a contented and prosperous people, proud of a Government which devotes its energies to the development of the vast resources of the country, and to the advancement of national and individual wealth and happiness. But this, perhaps, may be considered foreign to the matter in hand. It is referred to for the purpose of preventing any inference of hostility, on the part of the committee, to our works of public improvement. They war not with the improvements, but with the manner and improvident expenditure of their construction.

MODE OF CONTRACTING FOR BUILDING—APPARATUS AND OIL.

Since 1816 all the light-houses and light-boats have been built by contract, invited by notice in the public prints. The contracts invariably have been given to the lowest bidder, having the ability to guaranty its performance. A suitable practical mechanic is employed to oversee the work constantly. Nothing is paid or advanced to the contractor until he obtains the certificate of the overseer, that the contract has been faithfully performed. In like manner, proposals for fitting up the light-houses with lamps, reflectors, &c., are invited, and the contracts given to the lowest bidder.

By this mode competition is elicited, and, in the opinion of the committee, economy most effectually promoted. No losses can occur, as no advances are made until the completion of the work.

In the same way all the oil is procured. It is the interest of the contractor to furnish the best quality; for, if found bad, he not only gets no pay for it, but is bound to take it back, and substitute the best quality. Actual experiment by burning is the only true test of the quality of oil. The oleometer will not prove it. The practice now adopted of taking samples from each cask, and submitting them to the test of the lamp, cannot but ensure the best quality. That oil congeals in cold weather is no proof of its badness. Oil pressed in winter, when the thermometer is at a given degree, will congeal whenever the thermometer falls below that degree. A stove and oil heater are the only remedies.

A vessel in the employ of the Department is constantly engaged in visiting the light-houses, supplying them with oil and other necessary supplies

and having on board a mechanic, to make all proper repairs to the lighting apparatus. Captain Howland, in 1840–'41, on board this vessel, visited one hundred and fifty-five light-houses, from Maine to the Sabine, and put them in repair. As a proof that the oil furnished by the contractors is good, he found but 600 gallons of oil in all of them bad, and much of this was mere settlings.

It has been objected by some, who arraign the Department for want of economy, that the average consumption of oil in our light-houses is less than that consumed in the British houses. This is no doubt true. But the committee do not perceive the justness or consistency of the rebuke, especially as it appears that our lights are more efficient than those of Great Britain. It is said that the average annual consumption of oil per lamp in England is forty-three gallons. From the accounts given by Captain Howland, it does not exceed 30 gallons per lamp; showing an economy in the use of oil of more than forty-three per cent. over the British lights.

As an evidence that an increased consumption of oil beyond a given quantity does not add to the efficiency of the lights, the Cape Cod and Cape Henlopen lights may be cited in contrast. (See paper annexed, marked I.) The former was put up by Mr. J. W. P. Lewis, and consumes 68 gallons, each lamp, per annum. The latter, fitted up by Winslow Lewis, consumes only 33½ gallons, each lamp, per annum.

It is understood that the Cape Henlopen light is as efficient as that at Cape Cod, notwithstanding this great disparity in the consumption of oil. A greater elevation of wick, accompanied with a current of air, on the principle of the carcel lamp, produces this increased consumption of oil. But experiment has shown that no corresponding advantage of increased range of light is the consequence.

AUDITING ACCOUNTS.

In the first instance, all accounts in any way growing out of or connected with the establishment are examined at the office of the general superintendent, and abstracts of them made. They are then sent to the First Auditor and First Comptroller, to undergo the same examination and scrutiny as are given to all accounts with the Treasury Department.

The Fifth Auditor has furnished to the committee every facility in aid of this investigation, and has invited a strict scrutiny into all the accounts—a labor not within the scope of its duty, and one which it had not time to perform.

It has already been said that, since 1820, the Fifth Auditor has had charge of the establishment. For many years before that period, this auditorship had been established. Its duties consisted principally in auditing accounts of the State Department, connected with our foreign diplomacy, consulates, commercial agencies, and census accounts. The superadded duties of overseeing our light-house system brought with it no increase of salary. The expense of two clerks since 1838 is all that has been incurred. Should the superintendence be taken from the Auditor, he would still be Auditor, and receive the same salary that he now receives.

The expense of replacing, recovering, repairing, mooring, and taking care of buoys is a part of the general cost of the light-house establishment. It varies in amount in different years, dependent principally on the character and frequency of the storms.

The annexed paper (marked J) gives the expenses, under the above heads, for the last four years, of the buoys in the district of New York. Such expenses for 1840 and 1841 amounted in the whole to $3,645. What was paid in these years for mere *salvage*, the committee are not informed. It could not have constituted any considerable portion of the sum of $3,645, above stated.

LOSSES BY UNFAITHFUL AGENTS.

When defalcations and embezzlements of public moneys by faithless agents, in almost every branch of the public service, shock the moral sense of the community, it is gratifying to know that in this department (with but a solitary exception) no losses have been sustained by the Government, through the dishonesty of disbursing agents. A disbursement of some $7,000,000 since 1820, by the present general superintendent, has been attended with the loss only of $1,117. (See letter annexed, marked K.)

Two communications from the Fifth Auditor, (marked L and M,) addressed to the committee, are appended to this report. They relate to charges preferred against his management of the establishment, and to other matters connected with it.

Since writing the foregoing report, there have been referred to the committee two communications from Winslow Lewis, Esq., whose name has been used in connexion with charges against our light-house system. The committee are informed and believe that Mr. Lewis is a gentleman of respectability. He is personally known to some members of the committee as a man of unblemished character. The committee deem it but just to Mr. L. that his communications be printed with this report. They are appended, (marked N and O.)

The committee ask leave to introduce a bill providing for the appointment of an additional inspector of light-houses and light-boats.

A.

TREASURY DEPARTMENT, *March* 8, 1842.

SIR: I have the honor of transmitting herewith, in reply to the resolution of the House of February 18, concerning the expenditures for light-houses, the report of the Fifth Auditor, embracing a statement of the amount annually expended from 1st of July, 1816, to 1st July, 1841.

I am, respectfully, your obedient servant,

W. FORWARD,
Secretary of the Treasury.

Hon. J. C. CLARK,
Committee on Commerce, Ho. of Reps.

TREASURY DEPARTMENT,
Fifth Auditor's Office, March 7, 1842.

SIR: I have had the honor to receive the letter of the Hon. John C. Clark, on behalf of the Committee on Commerce, of the 18th ultimo, with

the resolution of the House of Representatives it enclosed, in relation to the light-house establishment, which you referred to me.

On the subject of the expenditures of the establishment, I have the honor to enclose a tabular statement, showing the expenses of each year, from 1st July, 1816, to the 1st July, 1841, in repairing and rebuilding light-houses and light-boats, refitting light-houses with improved lanterns, lamps, and reflectors, &c., in one column; in oil, repairing apparatus, &c., in another column; in building light-houses, light-boats, and beacons, in a third column, and the total expense in a fourth column. The expenses have been calculated from July to July, in each year, because our estimates to be laid before Congress in each year are made up in September or October, and are predicated upon the actual expenses of the year preceding; and we have not the accounts rendered and settled to a later period than 1st July, or rather, 30th June, which show those expenses.

For the last four or five years the expenses of the establishment have increased considerably, in consequence, principally, of the great increase in the number of light-houses, but in some degree of the large number I have caused to be fitted up with the improved lanterns and with improved reflectors, models of which I obtained from England within the above period. The old lanterns, containing glass not larger than 8 by 10 or 10 by 12, presented so much sash, and that very thick, as to obstruct the light and impair its usefulness in a great degree. From many of the light-houses on the seaboard, from Boston to Savannah, therefore, they have been removed, and new lanterns substituted, calculated to contain panes of glass 24 by 20 inches, and they have been fitted up anew with lamps and 21-inch reflectors, made on a die or mould, as manufactured and used in England, and plated in the best manner. The lights, thus improved, we have satisfactory evidence, have been seen, or at least some of them, 35 miles.

The models of reflectors, 21 inches diameter, with lamps obtained in England, cost $150 each, and those made in the same manner at Boston, and plated with 16 ounces of silver, and highly polished, have been obtained and fitted up in many of our light-houses at a cost of $80 only.

In consequence of the embarrassed state of the Treasury, I shall forbear, during the present year, to place any of the new improved lanterns and reflectors on any of the light-houses on which the old ones will, in any manner, answer the purpose intended, except it be the Charleston light, which being a very important one, and the lantern and lamps and reflectors very old and decayed, it is my purpose to have refitted this spring.

For the information of the Committee on Commerce, it is proper to state, what was recently made known to the Committee on Retrenchment, that in England a board of twenty-one active members and ten honorary members, called the *Trinity Board*, with numerous persons under them, is employed principally in the care and management of their light-house establishment, which, in 1834, consisted of 42 light-houses and 13 floating lights, as stated in a report made to the House of Commons by a committee of its members. The average expense of these light-houses and light-vessels, according to a report made by the board to the House of Commons in the year 1837, (now in my possession,) is as follows:

42 light-houses, average expense $2,610 each.
13 floating lights, do. 8,381 do.

For the year ending 30th June, 1837, the light-houses and floating lights of the United States cost as follows:

212 light-houses, average expense $1,115 each.
27 floating lights, do. 2,391 do.

From this comparison, embracing the expenses of every kind in the maintenance of the two establishments, the committee will be able to judge how far it is expedient, in the language of the resolution, to rearrange the establishment, or to change the mode of its superintendency.

In a letter I had occasion to address to the Hon. John Davis, of the Senate, in May, 1838, published with a report of the Committee on Commerce of the Senate, 2d session 25th Congress, No. 428, I expressed my opinion very fully upon this subject. In that letter it was stated: "I consider the present arrangement for managing the light-house establishment of the United States the most simple and the most economical that can be devised, and at the same time sufficiently effectual. But it is now a mere Treasury arrangement, and ought to be recognised and established by law. The collectors are designated to act as superintendents, under the direction of this office, without any authority of law, and might refuse to execute the duty, if a control was not held over them by means of their collector's offices. They should be bound by law, or at least such of them as may be designated by this office, in concurrence with that of the Secretary of the Treasury, to act as superintendents of lights, under the direction of this office, with a compensation to be fixed by law." [But to impose this duty on them without compensation would be both unjust and impolitic.]

"It is not known to the public who has the general superintendence of the light-house establishment. It is generally believed to be in the hands of the Secretary of the Treasury, who has, in fact, but little to do with it. I would respectfully propose, therefore, that the name and the style of the office should hereafter be '*the Auditor for the Department of State, and General Superintendent of the Light-house Establishment.*' The powers and duties of the Auditor may remain as fixed by the law of the 3d March, 1817; but those of the light-house establishment ought, in a general way, to be defined by law."

As the committee are required by the resolution, among other things, to inquire into the propriety of equalising the compensation of the superintendents, light-house keepers, and the keepers of other lights, buoys, &c., it may be proper to say something upon that subject.

For many years past, the superintendents have been allowed 2½ per cent. on their light-house disbursements, and, down to the year 1822, the establishment being inconsiderable, those having the most to disburse did not receive exceeding four or five hundred dollars a year for their services. By a law passed 7th May of that year,* however, the compensation as superintendents was limited to four hundred dollars a year, and, since that time, some four or five, having the largest districts, have received that amount; and the residue, about forty in number, received only from one hundred to two hundred dollars each, per annum. It is not perceived how any cheaper or better mode can be adopted; for, as to equalising the services and compensation of these officers, situated as the light-houses are, it is altogether impracticable. It is equally impracticable to equalise the pay of the keepers by law, and do justice to them. By the law of the 23d May, 1828,† which was passed upon the recommendation of this office, the Secretary of the Treasury was authorized to allow such compensation to the respective keep-

* Vol. 7, page 83. † Vol. 8, page 66.

ers as he should think proper, not exceeding an average of four hundred dollars per annum. Under this law, the advantages and disadvantages of each keeper were taken into view by the Secretary and myself, and the salary of each fixed accordingly, varying from three hundred and fifty to six hundred dollars. No other mode, which has occurred to me, is so well calculated to do justice to the respective keepers.

The salaries of the keepers of floating lights were established by the act of the 26th May, 1824, fixing those at sea at seven hundred dollars, and those in the bays and sounds at five hundred dollars, conformably to which the salaries of the keepers of all floating lights subsequently built have been fixed.

For my opinion on the subject of the lenticular apparatus obtained from France, and fitted up in the two light-houses at the Neversink, near Sandy Hook, and for a detailed statement of the management of the light-house establishment generally, I beg leave to refer the committee to a letter I addressed to them on the 28th December last, and to ask the favor of them to make it a part of this report.

I have the honor to be, very respectfully, sir, your obedient servant,

S. PLEASONTON.

Hon. WALTER FORWARD,
Secretary of the Treasury.

Expenses of the light-house establishment from 1st July, 1816, to 1st July, 1841.

In the years	Cost of rebuilding, repairing light-houses and light-boats, improving lighting apparatus, wicks, tube glasses, buff skins, transportation of oil, keepers and superintendents' salaries, &c.	Cost of oil.	Cost of sites, and of building light-houses, light-boats, beacons, constructing & placing buoys, &c.	Amount of the expenditures.
1817	$98,407 27	$23,780 00	–	$122,187 27
1818	92,941 51	19,126 00	$50,000 00	162,067 51
1819	87,007 20	33,932 22	24,411 37	145,350 79
1820	77,634 28	26,822 00	58,445 51	162,901 79
1821	100,898 70	20,423 06	25,263 08	146,584 84
1822	81,208 52	28,410 00	36,261 24	145,879 76
1823	101,072 47	16,477 60	100,060 18	217,610 25
1824	98,171 76	13,239 34	42,008 86	153,419 96
1825	166,524 62	11,754 15	59,585 87	237,864 64
1826	88,615 37	25,027 91	75,206 44	188,849 72
1827	126,057 93	36,191 70	162,610 15	324,859 78
	During the twelve following years, cost of wicks, tube glasses, buff skins, &c., are not here included.	During the twelve following years are here included, cost of oil, wicks, tube glasses, buff skins, and repairing lighting apparatus.		
1828	137,614 23	38,572 35	89,297 59	265,484 17
1829	123,629 93	39,439 74	121,903 40	284,973 07
1830	135,401 32	43,092 50	60,208 81	238,702 63
1831	140,242 48	42,226 06	122,857 80	305,326 34
1832	142,330 31	47,191 99	70,595 09	260,117 39
1833	186,582 42	79,412 21	48,245 82	314,240 45
1834	206,163 61	68,715 65	10,062 22	284,941 48
1835	201,410 33	70,362 02	110,336 62	382,108 97
1836	210,813 33	73,238 74	33,742 19	317,794 26
1837	227,963 33	74,482 58	75,971 92	378,417 83
1838	268,263 00	88,189 00	197,566 18	554,018 18
1839	300,088 00	94,243 62	219,044 67	613,376 29
1840	323,131 00	108,856 26	102,245 94	534,233 20
1841	343,086 64	116,735 96	14,988 84	474,811 44
	$4,065,259 56	$1,239,942 66	$1,910,919 79	$7,216,122 01

B.

TREASURY DEPARTMENT,
Fifth Auditor's office, May 10, 1842.

SIR: I have now the honor to send you, herewith, two tabular statements, showing the cost of each light-house and floating light in the United States, and the amount of surplus of appropriations which has been carried to the surplus fund.

Very respectfully, your obedient servant,

S. PLEASONTON.

Hon. JOHN P. KENNEDY,
Chairman of the Committee on Commerce, H. R.

A statement of the light-houses that have been erected, and their location, with the year in which they were erected, the amount appropriated for each, the cost of each, including cost of land, balance carried to surplus fund, cessions of jurisdiction, &c., from 1820 to 1842.

States.	Light-houses.	Years.	Amount appropriated.	Cost.	Cost of land.	Carried to surplus fund.	Cessions of jurisdiction, and remarks.
Maine - -							
	Pond island - -	1821	$11,000 00	$3,471 47	$90 00	$8 43	Land ceded by the State, and by Mass.
	Burnt island - -	1821		3,691 97	150 00		Jurisdiction ceded by the State.
	Libby island - -	1822		3,828 13	150 00		Jurisdiction ceded by the State.
	Mohegan island - -	1824	3,000 00	2,990 55	–	9 45	Jurisdiction ceded by the State.
	Owl's head - -	1825	4,000 00	2,707 79	258 75	1,292 21	Jurisdiction ceded by the State.
	Moose Peak island -	1826	4,000 00	3,955 60	150 00	44 40	Jurisdiction ceded by the State.
	Martinicus rock, 2 lights -	1827	4,000 00	3,825 04	20 00	174 96	Land and jurisdiction ceded by the State.
	Pemaquid p int - -	1827	4,000 00	3,503 49	90 00	496 51	
	Baker's island - -	1828	3,800 00	3,798 26	300 00	1 74	Jurisdiction over the island ceded by the State; deed of 123 acres.
	Cape Elizabeth, 2 lights -	1828	7,500 00	6,157 41	400 00	1,342 59	Jurisdiction ceded by the State.
	Dice's head - -	1828	5,000 00	3,699 27	200 00	1,300 73	Jurisdiction ceded by the State.
	Hendrick's head -	1829	5,000 00	2,662 05	200 00	2,337 95	Jurisdiction ceded by the State.
	Mount Desert rock -	1830	5,000 00	3,637 34	*10 00	1,362 66	Jurisdiction ceded by the State.
	Brown's head - -	1832	4,000 00	3,214 78	350 00	785 22	Jurisdiction ceded by the State.
	Marshall's point - -	1832	4,000 00	2,973 17	120 00	1,026 83	Jurisdiction ceded by the State.
	Goat island - -	1833	6,000 00	2,711 80	–	3,288 20	Jurisdiction ceded by the State; land company agreed to *give* title.
	Negro island - -	1835	4,500 00	3,917 30	400 00	582 70	
	Fort point - -	1836	5,000 00	4,377 06	750 00	622 94	
	Eagle Island point -	1837	5,000 00	3,928 41	301 42	1,071 59	
	Nashe's island - -	1838	5,000 00	4,044 37	–	955 63	Cession of land and jurisdiction by the States of Maine and Massachusetts.
	Bear island - -	1839	3,000 00	2,981 00	50 00	19 00	
	Saddleback ledge -	1839	15,000 00	14,918 71	–	81 29	Cession of land and jurisdiction by the States of Maine and Massachusetts.
	Whale's back - -	1829	20,000 00	19,960 33	–	39 67	

New Hampshire	White island	1821	$5,000 00	$4,857 56	–	142 44	Land and jurisdiction ceded by the State.
Massachusetts	Ten Pound island, and Baker's island and buoys.	1821	9,000 00	6,399 57	–	2,600 43	Land and jurisdiction ceded by the State, and deeded by the town of Gloucester.
	Billingsgate island	1822	2,000 00	2,000 00	–	–	Jurisdiction ceded by the State.
	Sandy neck	1826	3,500 00	2,911 25	–	588 75	Jurisdiction ceded by the State.
	Long point	1826	2,500 00	2,477 94	–	22 06	Jurisdiction ceded by the State.
	Gloucester point	1831	5,000 00	2,579 36	–	2,420 64	
	Straitmouth harbor	1835	5,000 00	4,091 29	600 00	908 71	
	Marblehead	1835	4,500 00	3,946 93	375 00	553 07	
	Ipswich, 2 lights	1837	7,000 00	6,560 62	80 00	439 38	
	Nauset beach, 3 lights	1837	10,000 00	7,050 01	154 00	2,949 99	
	Mayo's beach	1838	3,000 00	2,819 18	84 67	180 82	
	Cutterhunk	1823	3,000 00	2,936 16	300 00	63 84	Jurisdiction ceded by the State.
	Nantucket harbor light	1825	1,600 00	1,556 97	–	43 03	
	Monamoy point	1823	3,000 00	2,782 72	130 00	217 28	Jurisdiction ceded by the State.
	Nobsque point	1828	3,000 00	2,949 30	160 00	50 70	
	Dumplin rocks	1828	4,000 00	3,832 47	400 00	167 53	
	Edgartown	1828	5,500 00	4,274 73	80 00	1,225 27	
	Ned's point	1837	5,000 00	4,302 07	240 00	697 93	
	Nantucket Cliff beacons	1838	2,100 00	1,828 78	42 00	271 22	
Rhode island	Goat island	1823	2,500 00	2,482 55	–	17 45	
	Dutch island	1826	5,000 00	4,525 83	1,032 00	474 17	Jurisdiction ceded by the State.
	Warwick neck	1826	3,000 00	2,955 62	750 00	44 38	Jurisdiction ceded by the State.
	Nayat point	1828	3,500 00	3,470 51	300 00	29 49	Jurisdiction ceded by the State.
	Block island	1829	5,500 00	5,012 12	200 00	487 88	
	Poplar point	1831	3,000 00	2,999 41	300 00	59	Jurisdiction ceded by the State.
Vermont	Juniper island	1826	4,000 00	3,287 85	200 00	712 15	Jurisdiction ceded by the State.
Connecticut	Stonington	1823	3,500 00	2,916 57	300 00	583 43	Jurisdiction ceded by the State.
	Morgan's point	1831	5,000 00	4,148 43	300 00	851 57	Jurisdiction ceded by the State.
	Stratford point	1821	†4,500 00	2,054 98	180 00	2,445 02	Jurisdiction ceded by the State.
	Norwalk island	1826	4,000 00	3,793 24	250 00	206 76	Jurisdiction ceded by the State.
	Great Captain's island	1829	5,000 00	3,455 17	242 16	1,544 83	Jurisdiction ceded by the State.
New York	Old Field point	1823	4,000 00	3,999 25	400 00	75	Jurisdiction ceded by the State.
	Fire Island inlet	1826	10,000 00	9,999 65	50 00	35	
	Throg's neck	1826	7,000 00	4,100 91	–	2,899 09	Jurisdiction ceded by the State.
	Stoney point	1837	3,000 00	2,931 37	–	68 63	Jurisdiction ceded by the State.
	Kinderhook, Coxsakie	1829	8,000 00	8,000 00	875 17	–	Bought by United States, 1820.
	Stuyvesant	1829					

* To land agents.

† Including for Throg's neck.

STATEMENT—Continued.

States.	Light-houses.	Years.	Amount appropriated.	Cost.	Cost of land.	Carried to surplus fund.	Cessions of jurisdiction, and remarks.
New York—continued.	Esopus meadows	1839	$6,000 00	$5,304 93	$250 00	$695 07	Jurisdiction ceded by the State.
	Saugerties	1835	5,000 00	4,439 27	–	560 73	
	Four Mile point	1831	4,000 00	3,775 16	150 00	224 84	
	Flynn's Knoll	1839	200,000 00	–	–	–	To be built under charge of the Engineer department.
	Roundout creek	1838	5,000 00	4,905 98	–	94 02	Jurisdiction ceded by the State.
	Fort Tompkins	1828		4,526 66	–		
	Highlands of Neversink, N. J., 2 lights	1828	25,858 38	11,315 92	600 00	4,856 49	Jurisdiction ceded by the State.
	Prince's bay	1828		4,510 50	750 00	–	Jurisdiction ceded by the State.
				c't 648 81			
	Robbins's reef	1839	50,000 00	38,237 37	–	11,762 63	
	Plumb island	1826	4,000 00	3,838 88	90 00	161 12	Jurisdiction ceded by the State.
	Buffalo pier	1828	6,500 00	4,248 63	–	2,251 37	Pier, &c., property of the United States.
	Cedar island	1839	3,500 00	3,500 00	200 00		
	Portland harbor	1829	5,000 00	3,506 78	50 00	1,493 22	Purchased of the Holland Company.
	Dunkirk, 2 lights	1827	6,000 00	5,874 75	150 00	123 25	
	Do beacon	1837	2,700 00	2,700 00	–	–	Built on a pier.
	Silver creek	1838	4,500 00	4,500 00			
	Niagara Fort	1823	2,500 00	2,050 66	–	449 34	Built on the fort.
	Galloo island	1820	12,500 00	8,137 95	–	4,362 05	Cession of jurisdiction by the State.
	Oswego	1822	3,500 00	2,775 31	–	724 69	Land and jurisdiction ceded by the State.
	Genesee	1822	5,000 00	3,938 29	400 00	1,061 71	Jurisdiction ceded by the State.
	Sodus bay	1825	4,500 00	3,130 38	68 75	1,369 62	Jurisdiction ceded by the State.
	Tibbit's point	1827	3,000 00	2,707 09	60 00	292 91	
	Horse island	1831	4,000 00	2,952 15	500 00	1,047 85	
	Stoney point	1826	4,500 00	4,492 88	305 00	7 12	Jurisdiction ceded by the State.
	Salmon river	1838	3,000 00	2,999 94	500 00	06	
	Ogdensburg	1834	5,000 00	4,556 48	450 00	443 52	
	Cumberland head	1837	5,000 00	4,455 46	449 92	544 54	
	Split Rock	1838	5,000 00	4,540 55	524 54	459 45	
New Jersey	Barnegat	1834	6,000 00	5,896 39	–	103 61	

Pennsylvania	Cohanzey creek	1838	5,000 00	4,930 76	100 00	69 24	
	Presqu'isle, beacon	1837	674 00	636 26	–	37 74	For completing this beacon.
Delaware	Cape Henlopen, beacon	1825	3,000 00	2,890 50	–	109 50	
	Cape May	1823	10,750 00	9,864 92	400 64	885 08	Jurisdiction ceded by the State.
	Bombay hook	1831	5,000 00	4,110 25	–	889 75	
	Mahon's ditch	1831	10,000 00	4,975 00	–	5,025 00	
	Mispillion creek	1831	1,500 00	1,491 89	–	8 11	
	Christiana creek	1835	6,000 00	5,341 27	350 00	658 73	
	Egg island, N. J.	1837	5,000 00	4,993 03	–	6 97	
	Reedy island	1839	10,000 00	9,941 00	–	59 00	
	Fort Delaware	1823	1,500 00	1,450 00	–	50 00	
	Brandywine shoals	1827	29,200 00	29,200 00	–	–	Undermined by the sea and washed down, and not since rebuilt.
Maryland	Bodkin island	1822	22,200 00	6,974 98	825 00	35 27	Jurisdiction ceded by the State.
	North point, 2 lights	1823 '4		15,189 75	562 50		Jurisdiction ceded by the State.
	Thomas's point	1825	6,500 00	6,450 29	529 69	49 71	
	Pool's island	1825	5,000 00	4,739 60	–	260 40	
	Smith's island	1827	3,500 00	3,500 00			
	Concord point	1827	4,000 00	3,983 08	225 00	16 92	
	Cove point	1828	6,000 00	6,000 00	300 00		
	Point lookout	1830	4,500 00	3,840 00	–	660 00	
	Lazaretto point	1831	2,500 00	2,500 00	–	–	Site of fort owned by the United States.
	Clay island	1832	5,900 00	5,900 00	500 00		
	Turkey island	1833	5,000 00	4,996 00	564 00	4 00	
	Little Watt's island	1833	6,400 00	5,765 00	600 00	635 00	
	Sharp's island	1838	5,000 00	4,906 67	–	93 33	
	Piney point	1836	5,000 00	4,531 36	300 00	468 64	
Virginia	Back River point	1829	5,000 00	4,560 04	100 00	439 96	
	Assateague island	1832	7,500 00	5,788 00	500 00	1,712 00	
	Smith's island	1827	10,000 00	7,398 82	200 00	2,601 18	
	Smith's point	1828	7,500 00	6,088 50	500 00	1,411 50	Built anew on a new site.
North Carolina	Federal point	1826	2,000 00	2,000 00			
	Pamptico point	1828	5,000 00	5,000 00	50 00		
	Ocracoke	1823	20,000 00	11,359 25	50 00	8,640 75	Jurisdiction ceded by the State.
	Roanoke marshes	1830	10,000 00	6,359 35	–	3,640 65	Site with jurisdiction ceded by the State. Discontinued.
South Carolina	Rackoon key	1827	17,000 00	13,011 19	2,566 09		
	Morris's island, 2 beacon lights	1837	6,000 00	3,293 31	300 00	3,988 81 2,706 69	
Georgia	Tybee beacon	1822	1,200 00	1,200 00			

STATEMENT—Continued.

States.	Light-houses.	Years.	Amount appropriated.	Cost.	Cost of land.	Carried to surplus fund.	Cessions of jurisdiction, and remarks.
	Wolf isl'd beacons, 2 lights	1822	$8,000 00	$7,846 00		$154 00	Jurisdiction ceded by the State.
	Little Cumberland island	1837	8,000 00	8,000 00	$500 00		
Alabama	Mobile	1821	18,000 00	11,895 84	–	6,104 16	Jurisdiction ceded by the State.
	Choctaw point	1830	6,500 00	6,490 00	–	10 60	
	Round island	1833	7,000 00	5,895 00	–	1,105 00	
	Sand island	1837	10,000 00	8,899 00	–	1,101 00	
Florida	St. Augustine	1823	5,000 00	5,000 00	–	–	Old tower and site, United States' property by cession of treaty.
	St. John's river	1829	14,000 00	10,550 00	–	3,450 00	
	Amelia island	1838	8,000 00	7,500 00	500 00	500 00	
	Cape Florida	1825	16,000 00	10,790 85	–	5,209 15	Burnt by hostile Indians in 1836.
	Musquito inlet	1834	11,000 00	7,515 00	–	3,485 00	Land owned by the United States.
	Dry Tortugas	1825	16,000 00	10,790 85	–	5,209 15	Light-house undermined by the sea and destroyed. Light discontinued.
	Sand Key	1826	16,000 00	13,888 00	–	2,112 00	
	Key West	1825	16,000 00	10,790 85	–	5,209 15	
	St. George's island	1833	11,400 00	9,484 00	–	1,916 00	
	St. Joseph's bay	1838	10,000 00	10,000 00			
	Dog island	1838	10,000 00	10,000 00			
	St. Mark's	1829	14,000 00	11,765 00	–	2,235 00	Land owned by the United States.
	Pensacola	1824	6,000 00	5,725 00	–	275 00	Land owned by the United States.
Louisiana	Southwest pass South point	1831	40,000 00	19,843 00	–	20,157 00	
	Pleasonton's island	1833	7,000 00	6,665 00	–	335 00	
	Cat island	1831	5,000 00	4,647 50	–	352 50	
	Chefuncta river	1837	5,000 00	5,000 00			
	Pass Christian, Miss.	1831	5,000 00	4,647 50	–	352 50	
	Pass Manchac	1838	6,000 00	5,907 84	–	92 16	
	Port Pontchartrain	1838	20,000 00	5,647 50	–	14,352 50	
	New canal	1838	25,000 00	5,852 75	–	19,147 25	
	Vermilion bay	1839	13,000 00	10,263 10	–	2,736 90	
	Point de Fer	1826	14,000 00	13,774 00	–	226 00	
Ohio	Grand River	1825	8,000 00	6,957 24	1,487 24	1,042 76	
	Grand River beacon	1835	1,456 00	–	–	–	Built by the Engineer department on a pier.

	Cleveland, 2 lights -	1839	8,000 00	5,099 90	1,000 00	2,900 10	Beacon; built by the Eng. dept. on a pier.
	Conneaut river -	1835	2,000 00	–	–	–	Beacon; built by the Eng. dept. on a pier.
	Mouth of Black river -	1836	2,600 00	–	–	–	Beacon; built by the Eng. dept. on a pier.
	Ashtabula - -	1835	2,000 00	–	–	–	Beacon; built by the Eng. dept. on a pier.
	Cunningham creek -	1835	2,000 00	–	–	–	Beacon; built by the Eng. dept. on a pier.
	Mouth of Huron river -	1835	2,600 00	–	–	–	Beacon; built by the Eng. dept. on a pier.
	Turtle island - -	1831	5,000 00	4,918 47	300 00	81 53	
	Sandusky - -	1821	10,000 00	7,232 68	277 45	2,767 32	Jurisdiction ceded by the State.
	Port Clinton - -	1832	5,000 00	3,389 41	100 00	1,610 59	
	Cedar Point, beacon -	1839	5,000 00	3,738 49	500 00	1,261 51	
Michigan -	Fort Gratiot - -	1825	8,500 00	5,750 00	–	2,750 00	
	Windmill point -	1837	5,000 00	4,844 37	375 87	155 63	
	Otter Creek point -	1829	5,000 00	3,947 78	–	1,052 22	
	Saginaw - -	1841	5,000 00	5,000 00	–	–	Land belonged to the United States, and was reserved.
	Gibraltar - -	1838	5,000 00	4,506 92	450 00	493 08	
	Bois Blanc - -	1829	5,000 00	4,970 15	–	29 85	
	Thunder Bay island -	1832	5,000 00	4,839 93	–	160 07	
	Pottawatomie island -	1836	8,000 00	5,789 46	–	2,210 54	
	St. Manitou island -	1839	5,000 00	4,567 40	–	432 60	
	Presqu'isle, Lake Huron -	1839	5,000 00	4,456 70	–	543 30	
	Michigan City, (Ind.) -	1837	8,000 00	8,000 00			
	Mouth of St. Joseph's -	1831	5,000 00	4,039 88	200 00	960 12	
	Chicago, (Ill.) - -	1832	5,000 00	4,895 17	–	104 83	
	Mouth of Kalamazoo -	1839	5,000 00	5,000 00	150 00		
	Milwaukie, (Wis.) -	1839	5,000 00	4,602 25	–	397 75	
	Grand river - -	1839	5,000 00	4,761 12	120 00	238 88	
	New Buffalo - -	1839	5,000 00	4,969 00	200 00	31 00	
	Root river, (Wis.) -	1839	5,000 00	4,843 12	–	156 88	
	Chippewagan, (Wis.) -	1839	5,000 00	5,000 00			
	Manitowac, (Wis.) -	1839	5,000 00	5,000 00			
Mississippi -	Natchez - - -	1827	3,426 00	3,426 00	–	–	This light-house was destroyed by a tornado, which destroyed much of the town Natchez, a year or two ago. Materials of lantern, &c. sold. It was of little or no use, and it is not proposed to rebuild it.
	Total -		1,461,364 38	1,024,491 93	The cost of land is included in that of building.	224,216 45	
Deducting amounts expended, or to be expended under the Engineer department - - -			212,656 00				
			1,248,708 38				

P. S.—*Some additional appropriations transferred, or requested to be so, to the Engineer department.*

Amount of appropriations for removal of light-house on north end of Goat island $64,700
Do do for a beacon light on pier, Oswego harbor - - 11,351

Amount of appropriations for building light-house on Boandywine shoals $45,000
Do for building beacon light on pier mouth of Genesee river, &c. 7,750

C.

Statement of light-ships, name or place of location, year when built, amount of appropriation, cost of building, and amount carried to surplus fund.

State or district.	Name or station.	Year.	Amount of appropriation.	Cost.	Carried to surplus fund.	Remarks.
Massachusetts	Tuckernuck shoal	1828	$8,000 00	$8,000 00		
Connecticut	Bartlet's reef	1835	5,000 00	4,981 50	$18 50	
New York, (district)	Stratford point	1837	10,000 00	9,415 12	584 88	
	Sandy hook	1823	20,000 00	17,702 33	2,297 67	Removed to Delaware in 1829, and replaced by another in 1838.
Delaware, (district)	Five Fathom bank	1839	15,000 00	14,584 40	415 60	The first ship built for this station.
	Brandywine shoal	1823	*45,000 00	†43,000 00	2,000 00	
	Upper Middle shoal	1823				
Maryland	Hooper's straits	1827	9,000 00	8,924 33	75 67	
Virginia	Smith's point	1821	8,000 00	7,998 53	1 47	1 lantern, 4 lamps.
	Craney island	1820	–	7,728 96	–	2 lanterns, 8 lamps.
	Willoughby's spit	1821	25,600 00	6,528 99	3,749 07	2 lanterns, 8 lamps.
	Wolf-trap shoals	1821	–	7,592 98		
	Mouth of Rappahannock, or Windmill point.	1834	12,000 00	9,950 56	2,049 44	
	Bowler's rock	1835	5,000 00	4,921 00	79 00	
	Narrows of Potomac	1821	14,000 00	6,625 00	7,375 00	Transferred hither from Shell Castle island in 1824.
	Upper Cedar point	1837	10,000 00	7,448 64	2,551 36	
	Relief boat	1837	8,000 00	7,524 78	475 22	Built to relieve the others, as circumstances require.
North Carolina	Pamptico sound, or Long shoal.	1825	10,000 00	9,600 00	400 00	1 lantern.
	Southwest point, or Royal shoal.	1826	9,500 00	7,136 83	2,363 17	
	Nine-feet shoal	1827	11,000 00	10,762 50	237 50	
	Mouth of Neuse river	1828	10,000 00	9,271 38	728 62	
	Brant shoal	1831	11,000 00	8,020 21	2,979 79	

	Harbor island - -	1836	5,000 00	4,778 29	221 71	
	Roanoke island - -	1835	5,000 00	4,755 74	244 26	
	Wade's Point shoal -	1826	8,500 00	4,525 50	3,974 50	
	Mouth of Roanoke river -	1835	10,000 00	8,984 12	1,015 88	
	Cape Hatteras - -	1823	Included in the appropriat'n for the two Delaware light-ships.	Cost included with that of the 2 light-ships for Delaware bay.		
South Carolina -	St. Helena bar - -	1838	20,000 00	7,738 75	12,261 25	This appropriation was for the light-ships and for 2 light-houses not built.
Georgia - -	Tybee channel - -	1839	10,000 00	8,194 87	1,805 13	
Florida - -	Carysford reef - -	1825	20,000 00	18,505 00	1,495 00	
	Key West - - -	1838	10,000 00	10,000 00		
Louisiana - -	Northeast pass of Mississippi	1821	15,000 00	7,925 58	7,074 42	1 lantern, 4 lamps.
Michigan - -	Junction of Lakes Huron and Michigan.	1832	10,000 00	7,352 90	2,647 10	
Total -	- - - - -	–	$359,600 00	$300,478 79	$59,121 21	

* Including appropriation for the light-ship at Cape Hatteras.
† Including the cost of the light-ship for Cape Hatteras.

D.

Light-houses fitted up with the improved parabolic reflectors, and cost of the same.

	BOSTON LIGHT-HOUSE.		
	15 lamps and reflectors, procured in England in 1839, at £29 12s. 6d. each.		
1839.	14 put up in this light-house, cost £414 15s., par - - -	$1,843 33	
Dec'ber 31	Paid J. W. P. Lewis and H. N. Hooper & Co., for a new lantern, and fitting up - - -	2,905 83	
			$4,749 16
	CAPE COD LIGHT-HOUSE.		
Sept'ber 30	Paid H. N. Hooper & Co., for 15 21-inch reflectors, 15 lamps, lantern, deck, chandelier, &c. - -	$4,056 37	
Dec'ber 31	Paid J. W. P. Lewis, for preparatory repairs and fitting up - -	1,863 03	
			5,919 40
	THATCHER'S ISLAND (TWO) LIGHT-HOUSES.		
1841.			
June 30	Paid Winslow Lewis, for new lanterns, and fitting up with 10 lamps and 10 21-inch reflectors each, (including preparatory repairs) -		5,360 00
	SCITUATE LIGHT-HOUSE.		
June 30	Paid Winslow Lewis, for a new lantern and fitting up with 11 lamps and 11 14-inch reflectors, (including preparatory repairs) - -		1,910 00
	CHATHAM (TWO) LIGHT-HOUSES.		
Sept'ber 30	Paid Winslow Lewis, for rebuilding these two lights, and fitting them up with new lanterns and 10 lamps, and 10 14-inch reflectors each - - - - - -		5,849 40
	FAULKNER'S ISLAND LIGHT-HOUSE.		
1840.			
Sept'ber 30	Paid J. W. P. Lewis, for fitting up with new lantern and 9 lamps, 16-inch reflectors -		2,342 41
	STONINGTON LIGHT-HOUSE.		
Sept'ber 30	Paid J. W. P. Lewis for fitting up with new lantern and 8 lamps, and 8 16-inch reflectors		1,933 30

LIGHT-HOUSES—Continued.

	NEWPORT LIGHT-HOUSE.	
1841. Dec'ber 31	Paid Winslow Lewis, for fitting up with 15 lamps and 15 15-inch reflectors - - -	$750 00
	CAPE HENLOPEN LIGHT-HOUSE.	
1840. June 30	Paid Winslow Lewis, for fitting up with new lantern and 18 lamps, and 18 21-inch reflectors - - - - - -	3,500 00
	CAPE HENRY LIGHT-HOUSE.	
1841. Dec'ber 31	Paid Winslow Lewis, for fitting up like the above, (including some repairs) - -	4,000 00
	OLD POINT COMFORT LIGHT-HOUSE.	
Dec'ber 31	Paid Winslow Lewis, for fitting up with new lantern and 11 lamps, and 11 14-inch reflectors - - - - - -	1,775 00
	NEW POINT COMFORT LIGHT-HOUSE.	
Dec'ber 31	Paid Winslow Lewis, for fitting up with new lantern and 10 lamps, and 10 14-inch reflectors - - - - - -	1,900 00
	CHARLESTON LIGHT-HOUSE.	
1842. March 2	Winslow Lewis's offer accepted to fit up this light-house with a new lantern and 12 lamps, with 12 21-inch reflectors - - -	3,500 00
	TYBEE LIGHT-HOUSE.	
1841. July 20	Winslow Lewis's offer accepted to fit up this light-house with a new lantern and 15 lamps, with 15 16-inch reflectors - - -	3,500 00
	TYBEE BEACON LIGHT.	
1840. Sept'ber 30	Paid J. W. P. Lewis, for fitting with new lantern, 8 lamps, and 8 16-inch reflectors - -	1,693 96
	WOLF ISLAND (TWO) BEACONS.	
1841. March 31	Paid Winslow Lewis, for rebuilding the wooden beacon, and fitting up both with new lanterns and 6 lamps, with 6 14-inch reflectors each -	3,450 00

LIGHT-HOUSES—Continued.

	THUNDER BAY LIGHT-HOUSE.	
1841.		
Sept'ber 30	Paid Winslow Lewis, for fitting up with 11 lamps and 11 14-inch reflectors - -	$600 00
	Add - - - - - - -	52,732 63
	WHITE ISLAND LIGHT-HOUSE.	
March 31	Paid Winslow Lewis, for fitting up with new lantern and 15 lamps, with 15 21 inch reflectors - - - - - -	3,600 00
		56,332 63

E.

TREASURY DEPARTMENT,

Fifth Auditor's Office, December 28, 1841.

SIR: In my letter to the Committee on Commerce of the 14th of December, 1840, they were informed that a workman had been sent from France, at the request of this office, by Mr. Lepaute, the manufacturer of the lenticular apparatus, for the purpose of fitting up in the best manner two sets of lenticular apparatus in our two light-houses at Neversink, near Sandy Hook, and that it was expected the work would be completed before the close of the last year. In consequence of the inclemency of the weather, however, this work was not completed and both lights in operation before the month of March of the present year.

While the light of one tower was extinguished, and the work of putting up the lenses was in progress, a temporary light was erected and used, of the same character; and while the work of the second tower was in progress, the character of the temporary light was changed to suit the occasion, (the one being a stationary and the other a revolving light;) so that the character and appearance of the original lights were preserved, and vessels coming in from sea could readily recognise them, until both sets of lenses were fitted up and put in operation. The temporary light is still preserved, with all its apparatus, to be used in case of any accident happening to either of the lens lights.

This being our first attempt to use the lenticular apparatus, the expense attending it has been greater than it would be in a similar case hereafter. The expense of a workman from France, who, coming to this country late in the season, was obliged to prosecute his work in the short days of winter, many of which were too inclement for him and those associated with him to work, the cost of a lantern made under his direction, amounting to nearly thrice as much as one can now be made for, and many other expenses incurred at his suggestion, can be avoided in future, if it be thought proper by Congress to authorize any more of the lenses.

Upon a rough estimate of the cost of these two sets of lenticular apparatus, of the first and second order, and putting them up upon two light-houses already built, it appears to be between $23,000 and $24,000.

The cost of these lenses, however, is nothing compared to the beauty and excellence of the *light* they afford. They appear to be the perfection of apparatus for light-house purposes, having in view only the superiority of the light, which is reported by the pilots to be seen in clear weather a distance of forty miles. It was my intention to have had the distance accurately ascertained by means of one of the revenue cutters; but I have not yet had an opportunity to do so. There are some drawbacks, however, in relation to their management, which would render them unfit for use in the United States, upon a large scale—there being but one lamp which supplies all the light, with three or four concentric wicks; and this lamp, made upon the carcel principle, is very apt to get out of order, and the light become extinguished, if the keeper be not an intelligent mechanic, and capable at all times of making the necessary repairs.

We have been so fortunate as to obtain such a keeper at the Neversink—a man who can make every part of the machinery, both of the lamp and the clock work, and apply it in case of necessity without the least delay; and he is a man, moreover, who appears to take a pride in doing his duty in the best and most satisfactory manner. He has attached to him three assistants, taken from the class of seafaring men, who watch alternately every two hours through each night; and being near the city of New York, with which he can communicate in a few hours, he can always obtain men of a suitable character as assistants, and also all necessary materials for making every part of the machinery and keeping it in use.

There is not a single keeper, out of about two hundred and forty in charge of the reflector lights, so far as my knowledge ext nds, who is capable of taking charge of and conducting a lens light properly; and there are very few in our country who are capable and would be willing to receive the inconsiderable sum for their services which we give Mr. Lopez, the present keeper at the Neversink; viz: $600 dollars for both light-houses. It would therefore only be in the vicinity of large towns that we should have it in our power to obtain suitable keepers, and at the same time proper assistants, and materials with which to repair the machinery; and of course it could only be in the vicinity of those towns that it would be advisable to employ the lenticular apparatus.

The consumption of oil in the two lenticular light-houses has been upon an average three gallons a night, whilst the consumption of thirty-one argand lamps, previously used, was about the same quantity, being thirty-two gallons per lamp. The light from the lenses, however, is unquestionably better, but in what precise degree has not been ascertained.

I am desirous at this time to obtain one more set of lenticular apparatus, and that of the third order, to be fixed on the inward light in Boston bay, called the Long Island Head light; the outward light being already well fitted up with new twenty-one inch reflectors, as a revolving light, in a superior manner. The light proposed, being near Boston, could be examined from time to time by scientific men, and its relative advantages ascertained. It is possible also that an improvement may be made in the lamp, which at present is the chief objection to the use of the lenses.

The cost of a set of lenses of the third order, with fixed lights, such as I

desire, is set down by Mr. Lepaute, the manufacturer in France, at 9,000 francs, or about $1,800, which, with a lantern to be made at Boston, freight, &c., would amount to about $4,500; and the appropriation of this sum for this purpose is respectfully recommended.

In the course of the past summer and autumn, I have caused several of our principal sea lights to be refitted with the improved lantern, containing large plate glass, and with the improved reflector, made in moulds or dies, of the size of twenty-one inches diameter. The White Island, (one of the Isle of Shoals,) Thatcher's Island, (two lights,) in Massachusetts; Cape Henry, at the entrance of the Chesapeake bay; and Tybee light, at Savannah, Georgia, have been thus refitted.

The Scituate light, of a smaller class, and containing two lanterns, has been refitted with large plate glass and fourteen-inch reflectors, as have also the light-houses at Old Point Comfort and New Point Comfort, in the Chesapeake bay.

The two light-houses at Chatham, Massachusetts, for rebuilding which an appropriation was asked, but not made, during the two last regular sessions of Congress, being entirely unfit for use, were taken down, and rebuilt, at an expense of $6,750, out of the general annual appropriation for the present year. They were fitted up upon the improved plan, with fourteen-inch reflectors.

The light afforded by the improved reflector and lantern, the last of which, having but few sash, presents but a small impediment to the light, is spoken of with high commendation by masters of ships and pilots, who have had an opportunity of seeing it.

I was also under the necessity of building a new floating light for the Wolf-trap shoal, in the Chesapeake bay, to take the place of one unfit for service, at an expense of $9,015, out of the same appropriation.

It is my purpose, as the old lanterns, lamps, and reflectors, become unfit for use, to supply their places with the improved kind, of suitable size, so that in process of time the whole establishment will undergo this desirable alteration.

Since the contract with Messrs. Morgan & Co., for supplying the light-houses with oil, &c., was dissolved, I have directed the collector and superintendent of light-houses at Boston to advertise, early in March of each year, for all the oil, both winter and summer, as well as other articles, required for the light-houses during the year, from Maine to North Carolina, inclusive, (excepting the New York district,*) and have given the conrract to the person making the lowest offer; the oil and all the other articles to be of the best quality, and to be tested before they were received. As there is no infallible test of the quality of oil, except by burning it, that test was applied to each parcel by the custom-house officers, before it was received. The oil thus obtained has been found to be of the best quality, and no excuse for the keepers is now admitted for keeping bad lights.

The oil for the lakes is obtained in the same manner. On obtaining the oil, a suitable vessel has been chartered for conveying it, and all other articles necessary for lighting and repairing the lamps, to the light-houses, with orders to the captain to deliver at each light-house 35 gallons for each lamp, two-thirds summer and the other third winter oil, together with the

* New York being one of the best oil markets, the collector was directed to supply his light-houses from thence.

necessary number of tube glasses, wicks, &c., being one year's consumption; and also to cause all necessary repairs to be made to the lighting apparatus, oil cans, &c., and to substitute new lamps and reflectors where necessary, and with which he is provided.

For the Southern light-houses (viz: from South Carolina to Louisiana, inclusive) the oil has been obtained and forwarded in the same manner, but at a different period of the year, (viz: in October,) by which time the vessel has performed her Eastern tour of duty, and is prepared for the Southern. The captain of the vessel is required to produce the receipts of the keepers for all the articles delivered, and to report the condition in which he found and left each light-house, as well as the conduct of the keeper.

The supply of oil for the present year, (1841,) for the Eastern district, was obtained at $1 for the winter and 88¾ cents per gallon for the spring oil; and for the Southern district it was obtained at 98 cents for the winter and 86 cents per gallon for the spring oil. This, it will be perceived, was much lower, in both instances, than the market price. The price, however, fluctuates in such manner as to render it unsafe to rely upon these prices; and I have, therefore, in my general estimate for the year 1842, rated the winter oil at $1 10, and the spring or summer at $1 a gallon.

The expense of maintaining the light-house establishment, consisting of 256 light-houses, thirty floating lights, from thirty to forty beacons without light, and nearly one thousand buoys, is very considerable, notwithstanding the utmost economy has been used in all cases of expenditure. The light-houses, for the most part, are necessarily placed near the water, in low situations; and, although at first no danger was apprehended from the water, yet experience has shown that the water is constantly, in a more or less degree, encroaching upon the land; and in a few years it has been found that light-houses, which were considered in no danger when built, must either be removed to situations more secure, or have breakwaters put around them at an expense as great as that incurred in building them. Beacons are always placed on some dangerous shoal, in the water; are built at great expense; and, being exposed to the fury of storms and a raging sea, are frequently demolished, requiring a heavy expenditure to replace them. Buoys are replaced at great expense also, being frequently driven from their moorings, by storms, and lost.

The expense of the establishment, therefore, depends so much upon the weather throughout the year, that the estimate presented to Congress at the commencement of each regular session must necessarily be imperfect. The only guide in forming it, within the reach of this office, is the actual expense of the establishment for the preceding year, derived from the accounts made up to the 1st of July of that year, being the latest period to which the accounts are rendered and settled. The expenses of the entire establishment, for the last year, were as follows:

For the year 1841, ending 1st July—

For light-houses - - - - - -	$348,635 41
For floating lights - - - - -	85,050 58
For beacons, buoys, &c. - - - - -	26,136 60
Total - - - - - -	459,822 59

As the expenses of the establishment vary from year to year, as has been already stated, sometimes exceeding the estimate and appropriation, and at others falling much below them, it has been found necessary to bring

the balance of appropriations forward, from time to time, to meet any excess of expenditure for any particular year. Were this course not adopted, the establishment could not be kept up; many of the houses would be demolished, and the light in others extinguished for the want of means to protect the one and repair the apparatus of the other.

I have the honor to be, very respectfully, sir, your obedient servant,

S. PLEASONTON.

Hon. JOHN P. KENNEDY,
Chairman of Committee on Commerce, Ho. of Reps.

F.

TREASURY DEPARTMENT,
Fifth Auditor's Office, April 21, 1842.

SIR: Having caused the complaint of J. W. P. Lewis, in relation to our light-house establishment, to be laid before the Marine Society at Boston, and asked their opinion whether or not there are too many lights on the Eastern coast, and whether they could be easily distinguished one from another, and also as to the condition and management of the establishment, I have now the honor to enclose a copy of their answer, which goes to prove that there are not too many lights, and "that the lights generally on the American coast have been much improved, and are in a better condition now than they have ever been before."

Mr. J. W. P. Lewis, in his letter to the honorable Mr. Winthrop, having stated that the reflector invented by his uncle, Winslow Lewis, did not even approximate towards the truth—meaning a parabola—the latter gentleman employed Mr. R. H. Eddy, a gentleman of science, to examine his reflector, and give him his opinion, in writing, on the subject. This opinion Mr. Lewis has transmitted to me, as confirming opinions of scientific gentlemen heretofore given, as to the true character of Mr. Lewis's reflector. A copy of this opinion I have the honor to transmit herewith to the committee.

I have the honor to be, very respectfully, sir, your obedient servant.

S. PLEASONTON.

Hon. JOHN P. KENNEDY,
Chairman of the Committee on Commerce, Ho. of Reps.

TREASURY DEPARTMENT,
Fifth Auditor's Office, April 27, 1842.

SIR: Having requested the superintendent of light-houses at Portland, Maine, as well as the Marine Society of Boston, to inquire and inform me whether there were not too many light-houses on the coast of Maine, and if not, whether they were properly distinguished from each other, I have just received his answer, of which I have the honor to enclose a copy. This paper, with that recently sent to the committee, from the Marine Society at Boston, will afford much useful information to the committee, and to the House of Representatives generally.

I take this occasion, also, to transmit the copy of a letter lately received

from Captain Sturgis, of the revenue cutter on the Boston station, whose testimony in regard to the light-houses, from his frequent examinations of them in Massachusetts, is entitled to high respect.

The two Plymouth light-houses, of which Captain Sturgis speaks, were built of wood many years ago, and are now in so decayed a state as to be unworthy of repair. For several years past, I have recommended to the Committee on Commerce to make a special appropriation of $7,000, to enable me to rebuild them in a permanent manner, of bricks or stone. I am much afraid they will fall to the ground in the course of the summer.

I have the honor to be, very respectfully, sir, your obedient servant,

S. PLEASONTON.

Hon. JOHN P. KENNEDY,
Chairman Committee on Commerce, Ho. of Reps.

BOSTON, *April* 12, 1842.

SIR: By your note of the 11th instant, you state you "have a die in operation, made a few years since, to correspond with the form of the reflectors you have made for more than thirty years," and "on which you now form all your reflectors." You request the favor of me to examine the die, and the reflectors formed on it," and give you my opinion, in writing, whether the form of the die is a true parabola, or as nearly so as hard metal or iron can be formed."

Having taken the requisite means to determine the true form of your *die*, I find it corresponds as nearly to a *parabolical* of three inches focal distance, as I believe it possible to be mechanically produced; or in other words, practically speaking, I do not believe another die could be formed, which, in a section through its axis, would present a closer approximation to a parabolic curve.

Respectfully, yours,

R. H. EDDY.

WINSLOW LEWIS, Esq.

BOSTON, *April* 16, 1842.

SIR: Agreeably to instructions from the Boston Marine Society, I have the honor to write you, and transmit to you a copy of the vote of the board of trustees of the society, with regard to the light-houses, &c., on this coast, which you have herewith enclosed.

Respectfully, sir, your most obedient servant,

ROBERT B. EDES,
Secretary B. M. Society.

STEPHEN PLEASONTON, Esq.,
Fifth Auditor and Act. Com. of the Revenue.

At a special meeting of the board of trustees of the Boston Marine Society, held on the evening of the 8th of April, 1842, a letter from S. Pleasonton, Fifth Auditor of the Treasury, to Winslow Lewis, Esq., of Boston, was read to the meeting. This letter was accompanied with a copy of a

letter from J. W. P. Lewis to the Fifth Auditor, containing various statements, and expressing various opinions relating to the light-houses on the coast of America, their condition, location, number, &c., and suggesting a general plan of improvement. This letter from J. W. P. Lewis represents them as generally in a bad condition; that some are injudiciously located, and that they are more numerous on the coast of Maine than is required by the interests of navigation. Mr. Pleasonton, in his letter to Winslow Lewis, requests that gentleman "to lay the representations of J. W. P. Lewis before the Marine Society, and ask it how far they consider his representations correct or otherwise, and to favor him with their opinion, as to whether there are too many lights or not on the Eastern coast, and as to the condition and management of the establishment, so far as they are acquainted with it."

A committee was accordingly appointed, to take the above subjects into consideration, and report at a special meeting of the board of trustees. This committee have attended to their duty, and accordingly report as follows:

That they have carefully read the letter of J. W. P. Lewis, referred to, and believe that many of the statements which it contains may be easily substantiated or disproved, by a reference to documents accessible to the Fifth Auditor of the Treasury, such as the number of light-houses on different parts of the coast, their location, and the principle on which they are lighted. In regard to other statements in J. W. P. Lewis's letter, some of them may be inaccurate or too highly colored; but your committee have no means of ascertaining the true character of all these statements with sufficient accuracy to be able to give a definite opinion on the subject, without a personal inspection of the light-houses on the coast, their locations, and eliciting information from many individuals, whose testimony might be relied on, which, of course, they have neither the time nor opportunity of doing.

With respect to the present condition of lights on the coast, and their general management, your committee can only say, that they have reason to believe the Boston and Cape Cod lights have been greatly improved by the introduction of the new lanterns, and the apparatus imported from France,* a few years since, and are as good as can be wished, and fully equal to the lights in any part of the world. They have also reason to believe that the other lights in Boston bay are in excellent order and condition, and managed with care and economy. They have no reason to believe that the lights on different parts of the coast of New England, the Middle States, or at the South, are in a worse condition than they have been at any time for twenty years past. No complaints, authorizing a belief that such is the case, have come to the ears of your committee. On the contrary, they feel warranted in expressing an opinion that the lights generally, on the American coast, have been much improved, and are in a *better* condition now than they have ever been before. At the same time, they have no means of judging of their excellence, in comparison with the improved lights on the coast of France or Great Britain, or whether they are susceptible of improvement, by altering the architecture of the edifices, or changing the character of the lanterns, lamps, or reflectors.

With regard to the number of light-houses on the coast of Maine, your committee are of course unable to form a definite opinion which will be

* This ought to be England.

entitled to much weight, without a full and thorough investigation into facts, which would be a task of much labor, would be attended with expense, and occupy considerable time. They have, however, sought for information on this subject, from various persons well acquainted with the navigation of that coast. Among them are commanders of vessels and pilots; and all with whom they have conversed have expressed an opinion that the lights are not too numerous, that none can well be dispensed with, and that they are in a good and satisfactory condition.

In the year 1837, an appropriation was made by Congress for increasing and improving the light-houses in various places on the coast; but it was directed that, before the improvements should commence, the Board of Navy Commissioners should cause an examination to be made, and ascertain if the interests of navigation required any additional facilities. The proper measures were taken accordingly, and the Secretary of the Navy placed at the disposal of the Board several naval officers; and the Secretary of the Treasury instructed the commanders of the revenue cutters and the collectors of the customs to afford all the facilities in their power to the officers of the navy detailed for that duty. Captain Joseph Smith was appointed to examine the light-houses on the coast of Maine; the coast of New Hampshire was assigned to Commodore W. M. Crane; Massachusetts to Commodore Downes and Commodore Percival; and other portions of the coast were assigned to other officers. The reports of these officers your committee have never seen; but it appears, from a passage in the annual report of the Secretary of the Treasury of December 2, 1837, that these officers performed their duties in a satisfactory manner, and reported, respectively, to the Secretary of the Treasury. These reports, undoubtedly, embraced much valuable information, and many important facts on the subjects referred to in the letter of J. W. P. Lewis; information which was acquired under the most favorable circumstances, and which is probably far more accurate and more definite than it would be in the power of any committee of this society to obtain, unless similar facilities should be afforded them. But as several years have elapsed since this general examination was made, and as the subject of the condition, location, number, and improvement of light-houses is one of vital importance to navigation, and of course to the interests of the whole country, in the opinion of your committee no general change should be effected in the present system, until after due deliberation, and after having obtained more definite and correct information from another committee, composed of disinterested, scientific, and practical men, appointed by Government for this specific purpose, and who shall be furnished with the necessary facilities for obtaining the necessary knowledge. All of which is respectfully submitted, by

JOHN S. SLEEPER,
DANIEL C. BACON, } *Committee.*
RICHARD SOULE,

Boston, *April* 16, 1842.

I hereby certify that the above report is a true copy from the records.

Attest: ROBERT B. EDES,
Secretary B. M. Society.

BOSTON, *April* 20, 1842.

SIR: On my return to port, a few days since, after a cruise within the capes, my attention was directed to the recent debates upon the light-houses, and the alleged abuses in the administration of this department of the public service. Knowing, as I do, from twelve years' personal observation, that the light-houses on the Eastern coast are properly located, and that they are the dependence of the immense coasting navigation of this section of the Union, I am surprised that any person should assert that there were too many, or that any number could be discontinued without great hazard to commerce. There are entire lines of packets constantly sailing from almost every port east of Cape Cod, to New York, Baltimore, Philadelphia, and other places, whose dependence in the night is upon those long-established landmarks. Indeed, the locations of the lights are so well known by the coasting navigators that they seldom require a pilot, thereby saving annually large sums which would need to be paid for pilotage.

With regard to the condition of the lights, I have so often had occasion to report to you respecting them, that any additional testimony of their excellence would be unnecessary. In this State, particularly, the keepers are efficient, and most generally quite intelligent men, and their lights well tended. Since the light-houses have been supplied from the Boston custom-house, I have had frequent occasion to examine the supplies, and they have been uniformly of the very best quality the market would afford, and they have reported to me as entirely satisfactory.

Of the manner of distributing the oil and other articles, I think it as good as can be devised; a single vessel, at a low charter, and under the direction of Capt. Howland, whose experience is not excelled by any individual in the country, is all the Government can ask. Indeed, I should be at a loss to suggest any alteration in the present management of our excellent system. I consider all the lights in this district in the most perfect order. Plymouth light-houses are very old, and will soon require to be rebuilt. I have visited and examined most of the light-houses between Boston and New York, also Newport; and knowing the great interest you take in the light-houses is my apology for this letter.

I would also remark, that a light-house on Minot's rocks would be of vital importance to the commerce of Boston. There has been property enough lost there, the duties of which, no doubt, would have defrayed the expense of more than one light-house. Scituate light might then be discontinued.

I have the honor to be your obedient servant,

JOSIAH STURGIS, *U. S. R. S.*

Hon. STEPHEN PLEASONTON.

COLLECTOR'S OFFICE,
DISTRICT OF PORTLAND AND FALMOUTH,
Portland, April 20, 1842.

SIR: I have the honor to acknowledge the receipt of your letter of the 25th ultimo.

With a view to give you the best information attainable, in relation to the usefulness of the several light-houses under my superintendence, I wrote the collectors of customs and officers in the revenue cutter service, in this

State, on the subject, apprizing them of the fact communicated by you, that many of the members of Congress were under the impression that there are too many light houses on our Eastern coast.

To my inquiry whether, in the opinion of themselves or the owners or masters of vessels in their respective districts, any of the light-houses in this State are of questionable utility, and not sufficiently distinguishable from others in their neighborhood, each of them has replied. Herewith you will receive copies of their letters, accompanied by a copy of a statement signed by the principal citizens of Eastport, interested in navigation.

The views of the ship owners and masters, in this district, as far as I have been able to ascertain the same, do not differ materially from those of the same classes in other parts of the State. There will be found to be some disagreement in opinion between them and the commanders of the cutters on this station.

As at present advised, however, I have no hesitation in recommending that none of the light-houses in this State should be dispensed with, and that the number should not be increased.

Whether some one or more of the lights, which Capt. Walden states are visible at the same time from off Monhegan island, should not be so varied, in color or other respects, as to be more readily distinguished from others near them, is a question deserving of consideration, to which, in further compliance with your request, I propose to direct my future inquiries.

I am, with great respect, sir, your obedient servant,

NATHAN CUMMINGS,
Superintendent of Light-houses in Maine.

Hon. STEPHEN PLEASONTON, *Fifth Auditor of the Treasury, and Acting Commissioner of the Revenue, Washington.*

COLLECTOR'S OFFICE,
District of Kennebunk, April 4, 1842.

SIR: Your letter, dated 1st instant, in which you inquire whether, in the opinion of myself or the owners or masters of vessels with whom I am acquainted, "any of the light-houses within the State are of questionable utility," was received yesterday.

I can speak understandingly of those only in this vicinity, viz: The Goat Island and Boon Island lights. The Goat Island light, so far as I can learn, is of great value to our coasting vessels, and more especially so as a guide into the harbor of Cape Porpoise, which is much resorted to by coasters in bad weather, and which is one of the few harbors on our coast that can be entered with a N. E. wind; and Boon Island light also is regarded by all our seafaring men as an exceedingly valuable one.

I am decidedly of opinion that Goat and Boon Island lights are not of questionable utility; but, on the contrary, are of almost incalculable advantage to seamen navigating on this coast. I have conversed with many masters and owners of vessels in this town and its vicinity, on the subject, and find no one who does not unhesitatingly express the same opinion.

I am, sir, with much respect, your obedient servant,

DANIEL REMICK, *Collector.*

NATHAN CUMMINGS, Esq., *Collector, Portland.*

DISTRICT OF FRENCHMAN'S BAY,
Collector's Office, Ellsworth, April 5, 1842.

SIR: Your favor of the 1st instant, requesting my opinion, and that of the owners and masters of vessels with whom I am acquainted, in regard to the utility of the light-houses on the Eastern coast, was received yesterday.

I have made inquiry of those better acquainted with the subject than myself, and have only been confirmed in my opinion, heretofore formed, that they are of great public utility, and answer every purpose for which they were designed, and that none of them can be discontinued with safety.

The shipmasters and owners of vessels from this district and vicinity are very desirous that another light-house should be erected on one of the sand islands off Naskeag point, at the entrance of Union river and Blue-hill bays.

I am, sir, very respectfully, your obedient servant,

J. M. HALE, *Collector.*

NATHAN CUMMINGS, Esq.,
Collector, Portland.

COLLECTOR'S OFFICE,
District of York, April 5, 1842.

SIR: I have made an inquiry upon the subject of your communication to me of the 1st instant, and find the opinion of the owners and masters of vessels generally is, that there are not too many *light-houses* on our Eastern coast; and that the opinion of members of Congress who think the light-houses not sufficiently distinguishable is not in accordance with their experience; but they have unanimously expressed their opinion that the light on Cape Porpoise was of less utility than any other, but that *this* was not without public benefit, and ought not to be extinguished.

It has been a subject of much conversation here, and I believe there has been some action on the subject of having a light at the mouth of our harbor. It is thought that a light-house, rightly located, would be of great benefit, especially for a guide to its entrance in the night to such vessels as are caught off this place in a storm, as they might, in that case, run in with a N. E. wind, at any time with such a guide.

I am, sir, respectfully, your obedient servant,

JEREMIAH BROOKS, *Collector.*

NATHAN CUMMINGS, Esq.,
Collector, &c., Portland.

COLLECTOR'S OFFICE,
District of Waldoborough, April 5, 1842.

SIR: Yours of the 1st instant, inquiring whether, in my opinion, or the owners or masters of vessels with whom I am acquainted, any of the light-houses in this State are of questionable utility, &c., was received. So far as my knowledge extends, and from what information I can gather from masters of vessels in relation to the matter, there are no light-houses in this State of questionable utility, but, on the contrary, are of unquestionable

utility, particularly those engaged in the coastwise trade. There may be some light-houses in this State that are not sufficiently distinguishable from others in their neighborhood, but no such complaint has ever come to my knowledge. My opportunity for practical information on this subject has not been very extensive. I am, therefore, to rely on the opinion of mariners; all with whom I am acquainted concur with me in the above statement.

Very respectfully, your obedient servant,

GEORGE ALLEN, *Collector.*

N. CUMMINGS, Esq.,
Collector, &c., Portland.

SACO, *April* 5, 1842.

SIR: I have made the inquiry of the shipmasters at this port, respecting light-houses in the State of Maine, and with them I agree in opinion, that there are not too many light-houses, or any of them of questionable utility.

Respectfully, your obedient servant,

TRISTRAM STORER.

NATHAN CUMMINGS, Esq.,
Collector, &c., Portland.

COLLECTOR'S OFFICE, DISTRICT OF BELFAST,
Belfast, April 7, 1842.

SIR: In answer to your letter of the 2d instant, I have to say that I have inquired of many of our shipmasters, and other mariners who coast east and west from this port, whether any of the light-houses on this Eastern coast could be dispensed with, consistently with the safety of the navigating interest, and have come to the conclusion, from the above inquiries, that no light-house could be dispensed with, except the one at or near the mouth of the Sheepscot river, with respect to which the evidence seems to be, that vessels coming on to this coast are liable to mistake that for the light at Townsend. From the above inquiries, I am led to the opinion that the Sheepscot light is beneficial only to vessels going into that river.

Captain Whitcomb, of the revenue cutter Alert, gave it as his opinion that the light on Bear Island, N. E. harbor of Mount Desert, might be dispensed with; and on inquiry of Captain John Doyle, who is constantly coasting in a packet between this port and Eastport and Calais respecting the usefulness of that light, he said he considered it among the most important lights on the coast; and then observed that, on his last trip from Eastport, he considered that his vessel, with a valuable cargo on board, and probably the lives on board, were saved by that light; that had it not been for the light on Bear Island, his vessel must have gone on shore.

I am, with much respect, your obedient servant,

GEORGE THATCHER, *Collector.*

NATHAN CUMMINGS, Esq.,
Collector of the Customs, Portland.

P. S. I neglected to say that the general opinion of mariners here is, that the light on Dice's Head (the Castine light) is of little service to mariners, and perhaps could be dispensed with, and less missed than any light on the coast.

CUSTOM-HOUSE, MACHIAS, *April* 8, 1842.

SIR: Your letter of the 1st instant, in relation to the utility of all the light-houses on the Eastern coast, was duly received.

I have made such inquiries of masters and owners of vessels in this vicinity, who are acquainted with the location and character of the light-houses on the coast east of Mount Desert, as seemed to me to be necessary, and I find that there is an entire agreement in the opinion that they are all needed, and are all sufficiently distinguishable from each other. My own opinion cannot have much weight, as I am not much acquainted with the lights in question, to form a correct judgment. I once supposed that the light on *Wash's Island* (near Pleasant river, in this district) was of doubtful utility; but further inquiries have satisfied me that it is of considerable benefit, not only to navigation owned in that vicinity, but in a greater extent to other coasting and to foreign vessels coming on the coast, in making a harbor in Moose Peak Reach.

I am, very respectfully, your friend and obedient servant,

W. B. SMITH, *Collector.*

NATHAN CUMMINGS, Esq., *Collector of Portland.*

COLLECTOR'S OFFICE, WISCASSET, *April* 9, 1842.

DEAR SIR: With a view to give you the best information in my power on the subject of your inquiries, "whether any of the light-houses on the coast of Maine may be dispensed with," I have consulted several intelligent shipmasters of both political parties, and have also made an excursion to the seacoast in our revenue boat, for the express purpose of examining the location of Monhegan, Pemaquid, Boothbay harbor, Hendrick's Head, Seguin, and Pond Island; and the result of my own examination and collected information is, that the *omission* of either of these lights would be followed by great hazard of life and property; but, on the other hand, two shipwrecks happened last autumn, for want of a light in what is called the Sound, or main passage of Eastern vessels *within Damiscove* and *Seguin*, Fisherman's, White, Outer Heron, and other *islands*, and the dangerous rocks near them, such as Bantam, the Motions, White Island, Breakers, the Hypocrites, Pumpkin Rock, the Three Sisters, the Black Rock, Griffith's Ledge, and others, all about the Sound named, and which Sound is passed by all the steamboats and vessels, except Cunard's, and all vessels from New Brunswick and Nova Scotia, on account of the excellence of Boothbay harbor, approachable at any season and in any weather, and probably unrivalled as a resort of this kind on the whole seacoast of the United States.

Should the question be put to me, what light might be removed with the least hazard, I should name *Pond Island*, on account of the proximity of Seguin; but the great difficulty of entering Kennebec, on account of Pond Island bar on the one side, and the Lower Sugarloaf on the other, and the rapid and dangerous cross tides, suggested the location of Pond Island light. I frequently visit every nook and harbor in my own, the Waldoboro', and Bath districts, and have a first-rate [pilot] to command our boat, and have already detected several errors and omissions of dangerous ledges, which I have marked on Porter's charts—omissions probably by the engraver, which Porter did not live to correct, and which I will point out to you when we meet.

Yours, with respect and esteem,

M. SHAW, *Collector.*

NATHAN CUMMINGS, Esq., *Collector of Portland.*

UNITED STATES CUTTER MORRIS,
Portland Harbor, April 11, 1842.

SIR: Your letter of this date, requesting my opinion in regard to the number of light-houses on our Eastern coast, is now before me, and, in reply, I would respectfully state that I have long considered two of them entirely useless—on Hendrick's Head, in the Sheepscot river, and Pemaquid Point.

The first-mentioned light is often mistook for the light on Burnt Island, at the entrance of Townsend harbor, distant from Hendrick's Head about one mile and a half, which has proved fatal in one or two instances; in one of which, the schooner Galen, belonging to this port, supposing they were running for Townsend harbor, struck on a ledge near Hendrick's Head light, and seven men out nine were drowned. I have conversed with many of our most experienced shipmasters, who are all unanimous in opinion that the two above-mentioned lights ought to be dispensed with, as many valuable lives as well as property have been thrown away in consequence of their present location.

Pemaquid Point is neither a harbor nor coast light, and answers no good purpose whatever, as there are two lights within twelve miles of it, viz: Franklin Island to the northwest, and Monhegan Island to the southeast.

I would further inform you that, when off Monhegan, there can be distinctly seen, at one time, in the night, eight lights, all within the distance of about thirty miles.

I know of no further reduction or alteration which can at present be advantageously made in the light-houses on the Eastern coast.

I am, sir, very respectfully, your obedient servant,
GREEN WALDEN, *Captain*.

NATHAN CUMMINGS, Esq.,
Collector of the Customs, Portland, Maine.

CUSTOM-HOUSE, BATH, *April* 13, 1842.

DEAR SIR: I have delayed answering yours of the 1st instant, with a view to consult masters and owners of vessels upon the subject.

My inquiries have been confined to the light-houses within and near this district, and the result at which I have arrived is, that none of them could be discontinued without serious injury to the commercial and navigating interests. There are, as you know, but two lights within this district. The one on Seguin has been so long established, and is so useful to almost the whole navigation of the State, that I presume no man would for a moment think of its discontinuance. The Pond Island light is a more recent one, and is chiefly useful to vessels entering Kennebec and Sheepscot rivers; but as these constitute so very large a portion of the tonnage owned and employed in this State, and as the light is of the utmost consequence to them, it could not be discontinued without disastrous results. Some with whom I have conversed think that, if the light on Pond Island was, instead of a fixed, a revolving light, or was in some other way different from that on Seguin, it would be more useful; but whether, if a change were now made, it would not produce as much evil as good, should be well considerd before it is determined upon.

The light upon Hendrick's Head, in Sheepscot river, it is thought by some, was of questionable utility when constructed; but it seems to be universally conceded that it could not now be discontinued without serious consequences resulting. In regard to this last-mentioned light, however, the collector of Wiscasset will, of course, have much better means of judging of its utility than are within my reach.

I am, most respectfully, sir, your obedient servant,

P. SHELDON, *Collector.*

NATHAN CUMMINGS, Esq., *Collector, &c., Portland.*

COLLECTOR'S OFFICE, DISTRICT OF PASSAMAQUODDY,

Eastport, April 14, 1842.

SIR: I have delayed replying to your communication of the 1st instant, in expectation that I should be able to forward you at the same time the opinion of Captain Whitcomb and the officers of the cutter Alert. That vessel is, however, still absent on a cruise. When she returns, I will obtain and forward a letter from the officers.

I enclose, herewith, a statement signed by some of our principal merchants and shipmasters, and doubt not that memorials would be very generally sent in by those interested, if an intimation were given that such opinion prevailed at Washington.

I am satisfied from my own experience, as well as from information from other sources, that there is no ground for the intimation that there are too many lights. Indeed, there are many points along the coast of this State that would seem to demand an additional number.

I am, very truly and respectfully,

JOSEPH C. NOYES, *Collector.*

NATHAN CUMMINGS, Esq., *Collector, Portland.*

The undersigned, masters and owners of vessels, having before them a letter, stating "that several members of Congress are under the impression that there are too many light-houses on our Eastern coast, and that some of them are not sufficiently distinguishable from others in their neighborhood, and also requesting our opinion whether any of the light-houses within the State are of questionable utility, respectfully state: We do not think that there are too many light-houses on the Eastern coast, but are of opinion that more light-houses might and ought to be located in several places and harbors along the coast, now of difficult and dangerous access in dark and stormy nights; and some of us, masters of vessels, having sailed on the coast for a long time, know from experience the want of lights in several places that we now have in our minds' eye.

The only difficulty in distinguishing lights from others in their neighborhood is, from the want of more improved lamps and reflectors and other machinery, and, in some cases, better attendance of keepers. We do not consider it expedient to have light-houses distinguished by any particular marks or colors, as a light-house is of little use in the day time. We think improvements might be made in the color of the light, so as to avoid all

mistakes as to the name of the light. It is our opinion that all the lights on this coast are useful in their several locations for the purposes of navigation, and that the discontinuing of any of them might be attended with serious consequences.

L. F. Wheeler, shipowner.
Jacob Shackford.*
John Shackford.*
John Fennot.
Samuel Bucknam.
Stevens & Peabody.
Smith Tinckham.
Charles H. Hayden.
J. B. Knight.
Gilman Lamprey.
David Perkins.
William Harrington.
J. D. Auchews & Co.
Salter Greerle.
Stephen Ryerson.
Edw. H. Marshall.
Abel Michener.

COLLECTOR'S OFFICE, DISTRICT OF PASSAMAQUODDY,
Eastport, April 16, 1842.

SIR: Since my respects of the 14th, the Alert has arrived, and I now hand you, herewith, the opinion of the officers of that vessel respecting the lights on this coast.

I must be permitted to remark, that the opinions of Captain Whitcomb and Lieutenants Noyes are entitled to great weight, as there are few persons in the State of more experience or better qualified to judge correctly in this matter.

I am, with great respect, very truly, yours,
JOSEPH C. NOYES, *Collector.*

NATHAN CUMMINGS, Esq.,
Collector, &c., Portland, Maine.

UNITED STATES REVENUE CUTTER ALERT,
Eastport Station, April 16, 1842.

SIR: It is our opinion that the light-houses in Maine are of utility, with the exception of that on Bear Island, Mount Desert, and that on Hendrick's Head, at the mouth of Sheepscot river; and, further, we are of opinion that the two establishments above named might be dispensed with.

The light on Hendrick's Head is liable to be taken for Burnt Island light, in Townsend harbor, which latter light is at the entrance of one of the best and most frequented harbors on the coast, and is also near Hendrick's Head, at the mouth of the Sheepscot, and to which Hendrick's Head light is a guide.

Bear Island light is of little or no use as a guide into Cranberry Island, where nearly all vessels harbor in Mount Desert.

Very respectfully, your obedient servants,
JOHN WHITCOMB.
JOSEPH NOYES.
GEORGE S. NOYES,

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* Shipmasters of forty years' standing, and also shipowners.

CUSTOM-HOUSE, CASTINE, *April* 18, 1842.

SIR: I have consulted several, upon whose judgments reliance ought to be placed, in reference to the light-houses in this vicinity, and it appears to be the general opinion that there are no light-houses in this region that could be dispensed with, without inconvenience and injury; and I am satisfied that the light-houses in this district are not so numerous as to create confusion, and render one likely to be mistaken for another.

I am, with much respect, your obedient servant,

C. J. ABBOTT, *Collector.*

NATHAN CUMMINGS, Esq., *Collector, Portland.*

G.

TREASURY DEPARTMENT,

Fifth Auditor's Office, March 21, 1842.

SIR: According to a promise made to you a few days ago, I send you herewith the copy of the law appropriating $10,000 for three small lights on Nauset beach, Cape Cod, and the decision of the Navy Commissioners as to the propriety of erecting them, as authorized by another section of the law, and the report of Captain Percival, of the navy, on which the Navy Board predicated its decision.

It will, in the end, be seen that all the charges and insinuations of interested persons against the management of the light-house establishment have as little foundation as this.

I have the honor to be, very respectfully, sir, your obedient servant,

S. PLEASONTON.

Hon. JOHN C. CLARK,
of the Committee on Commerce, H. R.

Extract from an "act making appropriations for building light-houses, &c.," approved March 3, 1837.

"For three small light-houses on Nauset beach, Cape Cod, fifteen feet high, ten thousand dollars."

"SEC. 2. *And be it further enacted*, That, before any of the improvements aforesaid are commenced, the Board of Navy Commissioners shall cause an examination to be made, for the purpose of ascertaining whether the safety of navigation requires any additional facilities, and if so, what is most suitable for each place needing such additional facilities, and thereupon to report their opinion in regard to all such places, as speedily as may be, to the Secretary of the Treasury, who shall proceed with the works so recommended. But if the said Board, after causing such examination to be made, shall be of opinion that any of said improvements are not needed to facilitate the navigation, or that the navigation is so inconsiderable as not to justify the proposed works, or the same are inexpedient from any cause, no further proceeding shall be had, and their opinions, with the facts, shall be reported to Congress."

In pursuance of the above law, the Board of Navy Commissioners recommended as follows, to wit: "They also recommend the erection of the three proposed light-houses on *Nauset beach*, as recommended by Commander Percival."

BOSTON, *May* 20, 1837.

SIR: In the progressive execution of the order of the 8th ultimo, I proceeded to examine a site for the location of three light-houses near Nauset beach, and have staked out positions for the same. I have placed them at the southern extremity of the highlands of Cape Cod, and about one-fifth of the length of Nauset beach, from the northern extremity of the same. Nauset beach runs nearly north and south, and the sites selected will place the lights N. by W. ½ W., and S. by E. ½ E., 150 feet apart; and all vessels coming from the south, either outside in shore of Pollock Rip, must keep these lights fairly open; for when they bring them in range they are as near Nauset beach as they can venture to come with safety, being in from 4 to 5 fathoms water, and not more than a mile and a half or two miles, at the greatest extent, from the shore, and must haul off at once.

These lights will also be very conspicuous and important guides to vessels coming from abroad through the south channel, as the tide six-eighths of the time sweeps them to the south; and when they suppose themselves in a fair way, and off the highlands, they find themselves off Chatham or Nauset. Chatham lights are a good guide until you are some distance past Pollock Rip, when running from the south to the north, until you get within 8 or 9 miles of Nauset contemplated lights, when they (Chatham lights) are hidden by the highland of Chatham, and Nauset will then be seen, and, if they are kept open, will be a surety of their being in the right way. "The Highland" lights cannot be seen from Nauset lights, or taken for them; therefore, to the first interrogatory in the order of the 8th ultimo, it is my opinion that the safety of navigation does require additional facilities, and that the kind proposed by the act will be best adapted for the purpose; and the navigation is very extensive, and will justify the proposed expense of erection, attendance, and support; nor is there any reason to fear that the object would be mistaken for any other, since there is none of a *similar kind* on the coast, and therefore would not expose vessels to danger.

The position, as far as designated by the act, in my opinion, is the best for the purpose proposed, and no change of position from that staked out is desirable, to secure the greatest advantage from the work. Reasons heretofore stated are now offered, in addition, for information, to enable the Board to arrive at correct conclusions.

There have been within eight years ten vessels cast away on Nauset beach, valued, from the best information I could obtain, at little if any less than half a million of dollars, besides the loss of many lives; and but one or two of these vessels have been got off. There pass by this dangerous place not less than ten thousand vessels in a year; and it is by no means an extraordinary sight to be able to see and count, from the highlands, in a clear day, from 100 to 150 vessels at a time. The amount of property which passes over the shoals and through the Vineyard sound is several millions during the year.

It is estimated, by some who reside at Eastham and Wellfleet, that within fifteen years there have been from 100 to 150 lives lost by shipwreck. Nauset beach is so low that it is not discernible, on account of the high and broken land, from one-half to three-quarters of a mile back of it, which overshadows it. The expense of five acres of land, for the erection of the

lights and garden, and also to extend to where water can be obtained, will not cost more than $125.

I enclose a sketch of that part of the coast, including Nauset beach and the sites I have designated for the proper locations of the light-houses, showing also the places where some of the most disastrous shipwrecks have happened.

Respectfully,

J. PERCIVAL.

To the PRESIDENT *of the Board of Navy Commissioners.*

H.

Statement of original estimates of cost of twenty-three public works, the actual expenditure on the same, and the estimates to complete them—intended as a supplement to the reports of the Committee of Ways and Means, made to the House of Representatives. (See Rep. Committees 1835–'36, vol. 1, No. 297.)

CONNEAUT CREEK, OHIO.

Appropriations to 1838	$43,305
Original estimate of cost	20,000
Report of 1837: Estimate for 1837	8,000

"The old pier ought to be destroyed, and another larger than it be substituted."

Report of 1838: "Repairs of west pier prosecuted, as also the replacing of the decayed plank. A new pier head was also framed and sunk."

Estimate for 1838: For repairs	$4,353
For permanent works	14,628
	18,981

Transferred to topographical engineers.

Report of 1839 says: "The piers require to be repaired and made permanent."

Three estimates are given for the *permanent* completion of this work, averaging $70,000.

Report of 1840: Recommends an appropriation of $19,000 for the year 1841.

Report of 1841 says: "It will cost $1,500 to repair the dilapidations since the suspension of the work."

Whole amount of appropriations	$43,305
Estimate to complete	70,000
	113,305

Expenditure exceeds estimate by 115 per cent.

Do. and estimate to finish by 465 per cent.

And so it happens that $70,000 more are wanted to complete this work "permanently," when the report of 1832 says that "the pier at the mouth of the creek has been extended sixty feet into the lake since my last report,

and it is believed that the funds already available for it *will be sufficient for its completion.*" And in the report of 1835 we are told that "the works at this place *have been entirely completed.*"

CUNNINGHAM CREEK, OHIO, (*commenced in* 1826.)

Appropriations to 1835	$8,473
1836	1,275
1837	5,000
1838	5,000
Say	20,000
Original estimate	$2,000
Increased in 1829 to	6,473
Report of 1836: Estimate for east pier	$8,960
Do. for breakwater	8,120
	17,080

Report of 1837: Existing pier repaired, and decayed portions renewed. More appropriations recommended, viz:

To complete pier	$3,003
For breakwater	13,546
	16,549

NOTE.—Last year (1836) the estimate for the breakwater was only $8,120.

Report of 1838: West pier repaired; crib work of east pier carried forward to its proposed termination. More money wanted—

1st. To build the breakwater, (which was estimated to cost, in 1836 $8,000, in 1837 $13,500)	$21,128
2d. For completion of east pier	932
	22,060

Report of 1839: Work in statu quo. Much of the east pier remains in an unfinished state, and the west pier had not received all the stone intended. "The wants of agriculture or of commerce, or the business to be drawn to this place by them, (in the opinion of the report,) not being sufficient to justify the large expenditure recommended by the agent in 1837, the expenditure is not recommended." And this work is abandoned to its fate; for the reports of 1840 and 1841 recommended no appropriations.

The report of 1841 consoles us for this expenditure of money by informing us that "Cunningham Creek harbor enjoys but very little trade at present."

The account with this work stands thus:

Aggregate amount of expenditure	$20,000
Estimate, by report of 1838, to complete	22,000
	42,000

Original estimate $2,000.
Expenditure exceeds estimate by 900 per cent.
Do. and estimate of 1838 by 2,000 per cent.
And this is a work which the Engineer department said, in its first report, (1826,) "would be completed in the course of next year."

GRAND RIVER, OHIO.

Appropriations up to 1835	$39,500
Do for 1836	6,000
Do for 1838	10,000
	55,500
Original estimate of cost	15,000
Say	40,000

Report of 1836: "Harbor has suffered much injury, by storms, since last report. The end of the west pier was torn up, and large bodies of stone were washed from the cribs."
"The expenditure for the year was chiefly for repairs."
Report of 1837: "The operations of 1837 were rebuilding and repairing damages sustained by storms, and securing the works against similar disasters."
A list of expenses is given:

Repairing damages from storms of 1835	$7,736
Do old decayed work	4,284
Preventing cribs from tilting	700
Commencement of permanent works	18,264
Contingencies	1,440
Say	32,000

This work was commenced in 1826. Eleven years thereafter, an estimate, exceeding the original estimate by $3,000, is presented, to "*commence permanent works*," when, in 1832, the report stated the "*harbor to be in good condition*," and no further funds were wanted to "*complete its works*, and place them in good order."
Up to this period, nearly one-half of the years had been consumed in repairing damages of previous years.
Report of 1838: "The work of this season consisted of the repairing of damages sustained by the storms of the latter part of the last year on the west pier."
A new bar was discovered. To remedy this, it was recommended to extend the pier 300 feet. Again, we have a new estimate:

For the absolutely necessary repair of west pier	$3,952
For extension of west pier	8,947
For embankments	2,250
For removing sand bar	1,000
For commencing *permanent work*	21,776
Contingencies	948
Say	39,000

Transferred to topographical engineers, January, 1839.

Report of 1839: "But little has been done this year; a sand shoal has formed in front of the piers; a rebuilding of the piers is recommended. Four modes are proposed, and four estimates given; an average of the estimates is $82,000."

Report of 1840 asks for an appropriation of $24,000.

Report of 1841 says: "The piers at the mouth of the harbor have suffered considerably; a breach in one pier, and a large quantity of stone thrown out of both. To restore this harbor to its former condition, $3,000 is asked."

The account of this work stands thus:

Aggregate amount of appropriations - - - -	$55,500
Estimate, by report of 1839, to complete - - -	82,000
	137,500

Original estimate $15,000; actual expenditure exceeds estimate by 260 per cent.; actual and anticipated, by 800 per cent.

CLEVELAND HARBOR, OHIO.

Appropriations to 1835 - - - - -	$47,000
Do for 1836 - - - - -	15,000
Do for 1837 - - - - -	10,000
Do for 1838 - - - - -	51,856
	123,856

Original estimate, $10,000.

Report of 1836: Injuries sustained by the works from gales of last year repaired.

Report of 1837: The wood work removed, and the stone work substituted.

Estimate for the year 1838, $51,856.

Report of 1838: "The work, under the *liberal* appropriation of Congress, has been rapidly and thoroughly advanced during the season."

Estimate in report for 1839, $49,300.

Transferred to topographical engineers, January, 1839.

Report of 1839 says: "The work has progressed so far that it would be inexpedient to propose any essential modification of it now." An appropriation of $66,721 is asked, "to *complete* Cleveland harbor."

The account with the work may be stated as follows:

Total amount of appropriations - - - -	$123,000
Estimate to complete work - - - - -	66,000
	189,000
Original estimate - - - - - -	10,000
Excess - - - - - - -	179,000

Showing an excess of actual expenditure over estimate by 1,130 per cent., and of actual and prospective expenditure by 1,690 per cent.

CHICAGO HARBOR.

Amount appropriated,	1835	- - - - -		$89,801
Do	do	1836	- - - - -	32,000
Do	do	1837	- - - - -	40,000
Do	do	1838	- - - - -	30,000
				191,801

Original estimate, $59,772.

The report of the Engineer department, of November 15, 1835, says:

"The completion of this work is anticipated next year, if the appropriation asked is granted."

There was granted, as above stated, $32,000.

The report of November, 1836, chimes to the old tune:

"The season was so far advanced when the appropriation became available, that workmen could not be engaged, and therefore little progress was made in the work since the report of 1835, other than to procure a dredging machine and materials." The report says: "Operations have been delayed, since they were resumed this year, by boisterous and unfavorable weather, which has prevented any extension of the north pier into the lake."

The report of November, 1837, says "the season had advanced to the 13th June when the superintendent resumed the charge of this work." A new difficulty had developed itself since the report of 1836. "In consequence of the remarkable position which the outer bar has assumed, a still further extension of the piers, of two hundred feet beyond that contemplated last year, is rendered necessary."

On the 23d of August, 1838, the superintendence of this work was transferred to the Topogrophical bureau.

Colonel Abert reported, November, 1838: "That the harbor at present affords an easy entrance, and secures shelter in the worst weather to the largest class of boats and vessels engaged in the commerce of the lakes; and, from the great importance of its position, great solicitude is felt for the continuance and completion of the improvements."

From the report of December, 1839, made by Colonel Abert, on the authority of Captain Crane, we are informed that, "on commencing operations this year, (1839,) a sand bar was found extending not only entirely across the entrance of the channel, but to a distance of four hundred and fifty yards beyond." This report complains that "the piers have been carried out, from the commencement, without due regard to the direction of the prevailing winds." That "their position was wrong, compelling a vessel entering the harbor at times of severest storms to moor with wind abeam." That "the width assigned for the distance between the piers is too small, by at least one-half." That "the south pier is extended nine hundred feet too far into the lake." In a word, from this report, the piers seem to have been constructed with but little reference to utility.

Much complaint is no doubt justly made in regard to the combination of the wood and stone work. The foundation, too, is condemned. "No particular pains have been taken to prepare a proper foundation for the work to rest upon, although machinery was at hand, that could have been applied for obtaining good foundations."

This report recommends the "extension of the north pier twelve hundred feet, in the form of a curve, beyond the point where the work is now about to stop, for the want of funds;" and, further, "to terminate the extremity of the pier with a circular head," on which a light-house may be erected.

The report gives us an "approximate final estimate," as applicable to three different modes of constructing the newly suggested extensions—the lowest being $73,000, the medium $89,000, and the highest $215,000. The estimate of pier head and light-house, exclusive of lantern, is $15,000.

The report of 1840 is silent in regard to this work, except an appropriation of $30,000 is recommended, and that a balance of appropriation was on hand of $3,797.

The report of 1841 says: "To finish the work according to submitted plan and estimate will require about $216,000.

The account, then, with the Chicago harbor stands thus:

Whole amount of appropriations - - - -	$191,801
Deduct balance in Treasury - - - -	3,797
	188,000
New estimate, as above - - - - -	216,000
	404,000
Original estimate, (round numbers) - - -	59,000
Excess -	345,000

Thus it will be seen that the actual expenditure has exceeded the original estimate by two hundred and forty-eight per cent, and that the actual and prospective expenditure to complete the work exceeds it by five hundred and eighty per cent.

BIG SODUS BAY, NEW YORK.

Up to 1835, appropriations, (round numbers) - - -	$104,000
1836, appropriated do do - - -	12,000
1837, do do do - - -	12,000
1838, do do do - - -	10,000
	138,000

Original estimate, $72,000.

The report of 1836 speaks of this work as going on satisfactorily, and giving evidence of remaining a permanent improvement.

The report of 1837 (Ex. Doc. 1837–'38, vol. 1, p. 404) informs us that the natural decay of the timbers had already commenced. To preserve the work from further decay, an appropriation for stone, necessary, is asked, to the amount of - - - - - - $15,000
For dredging and piers - - - - - - 17,500
For securing beacon light, &c. - - - - - 815
33,000

The report of 1838 (see Ex. Doc. 1838–'39, vol. 1, p. 295) says: "The wood work above the surface of the water is extremely defective," and recommends the immediate construction of the "permanent work." The appropriation recommended swelled up from $33,000 to $50,000.

Work transferred to the topographical engineers, January 22, 1839. The report of 1839 (see Ex. Doc., 1839–'40, vol. 1, p. 692) speaks of the work as going into a state of dilapidation.

The report of 1840 says nothing of the work, but recommends an appropriation of $25,000.

The report of 1841 recommends an appropriation of $30,000, for the preservation and repair of all the harbors on the lakes, other than those enumerated, (of which there is not one.) What proportion of this $30,000, if appropriated, the Big Sodus harbor may come in for, is not known.

The work is rapidly decaying, and, without a new appropriation, will soon be numbered with the things that have been.

The Big Sodus bay account stands thus:

Whole amount of appropriations	$138,000
Amount asked by the report of 1838	50,000
For 1839, (it is impossible to say what the entire work may cost)	188,000
Original estimate	72,000
	116,000

Showing an expenditure exceeding the estimate by 90 per cent., and an actual and prospective expenditure exceeding it by 160 per cent.

PROVINCETOWN HARBOR.

Up to 1835, appropriations	$33,000
1836, appropriated	4,000
1838, appropriated	4,500
	41,500
Original estimate, (second estimate, $11,000)	3,500
Excess	38,000

Report of 1836 speaks well of the flourishing condition of the grass. Two hundred acres had been planted in that season, and as many more were estimated to be planted in 1837.

Report of 1837: "The grass grows well, and the protection of the beach will be accomplished, with the necessary appropriation, in 1840."

Report of 1838: "Owing to the late date of appropriation, nothing was done. Grass continues to look well."

Transferred to topographical engineers, January, 1839.

Report of 1839: "About 250 acres planted with beach grass this season. Sixteen thousand five hundred dollars will complete the work."

Reports of 1840 and 1841 are silent as to this improvement.

No doubt but that portion of the planted beach grass that has not been overwhelmed by the sand continues to luxuriate in its congenial soil.

State of the account of the Provincetown harbor improvements:

Up to 1835, appropriations	$33,000
1836 and 1838	8,500
	41,500
Necessary to complete, by report of 1839	16,500
	58,000
Original estimate	3,500
Excess	54,500

Actual expenditures exceeds estimate by 1,260 per cent.
Actual and prospective expenditure exceeds estimate by 1,800 per cent.

PLYMOUTH BEACH.

Up to 1835, appropriated	$49,000
1836, appropriated	500
1838, appropriated	2,400

Report of 1837 says: "That the wooden foundation sills are worm eaten, and that 320 feet should be replaced with substantial stone wall."
Report of 1838: A small estimate, for "securing and placing sea weed, and for setting beach grass," is presented.
Transferred to topographical engineers, January, 1839.
Report of 1839 asks for an appropriation of $1,500.
Report of 1840 asks for an appropriation of $2,000.

Amount of appropriations	$52,000
Wanted by report of 1840	2,000
	54,000
Original estimate of cost	43,000
Excess	$11,000

Excess of appropriations over estimate, about 25 per cent.

BLACK RIVER, OHIO.

Appropriations up to 1835	$45,000
Appropriations, 1836	6,660
Appropriations, 1837	6,410
Appropriations, 1838	5,000
	63,070
Original estimate of cost	25,334
Excess	37,736

Report of 1836: Operations of this year, general repair of machinery, and repairs of work injured by violent storms; large amount of stone on hand; further dredging necessary.

Report of 1837: Estimate for $13,875, for piles, stone, driving, contingencies, &c. Requisite repairs have been made; work progressing.

Report of 1838: Estimate, $25,000, for piles, stone, plank, dredging, and contingencies. Old work protected by new, &c.

Transferred to topographical engineers, January, 1839.

Report of 1839: Estimate for completing work, $90,210.

Excess of expenditure over estimate, by 150 per cent.

Excess of actual and prospective expenditure, as by report of 1839, by more than 500 per cent.

PRESQU'ISLE, PENNSYLVANIA.

Commenced in 1824.

Appropriations to 1838, inclusive, $142,858; original estimate, (highest,) $40,000.

Report of 1836 asks an appropriation of $98,152; a vigorous prosecution of the work is recommended.

Report of 1837 says: "Every encouragement is given that the plan now in process of execution will be attended with complete success."

Transferred to topograpical corps, August, 1838.

Report of 1838: "Estimate for 1839, $52,877; estimate to complete the work, $109,106."

Report of 1839 says: "No surveys of a character commensurate with the improvements projected at this place had (in 1838) been executed!"

Then it seems that some $120,000 had been expended on this work when no proper surveys had been made.

The estimate for 1840 was $44,000, and for the completion of the work $324,844! having grown to that amount from $109,106, the estimate of 1838.

Report of 1840 recommends $30,000 to be appropriated for 1841.

Report of 1841 says: "The work of dilapidation has already commenced; and, for the want of a proper finish, the crib work for 5 or 6 feet below the surface of the water has been carried away; thus leaving the whole *development* to inevitable destruction."

Aggregate amount of appropriations - - -	$142,000
Estimate of 1839 to complete work - - -	324,000
	466,000

Original estimate, $40,000; actual expenditure more than estimate, by more than 250 per cent.; actual expenditure and estimate of 1839 by more than 1,000 per cent.

DUNKIRK HARBOR, NEW YORK.

Appropriations up to 1835 - - - - -		$51,743
Do	for 1836 - - - - -	11,000
Do	for 1837 - - - - -	15,000
Do	for 1838 - - - - -	10,000
		87,743

Original estimate, $9,000

Report of 1836: "Work consisted of repairs principally; recommends a vigorous prosecution of the work next year, with stone laid in hydraulic cement.

Estimate for 1837, $47,784; estimate to complete the work, $194,806.

Report of 1837: Decay of timber complained of, causing extensive repairs. "In the three last years the sum of $8,000 has been laid out in repairs, which would have been unnecessary if the material used above water had been stone."

Why did not the engineer who first projected and estimated this work think of this? Was he ignorant of the destructibility of wood?

There were a plenty of fine stone within a few miles of the work. Why, then, use wood? The appropriation recommended for 1838 was $50,000.

Transferred to topographical corps, August, 1838.

Report of 1838: Estimate for 1839 - - - -	$50,000
Total estimate to complete work - -	201,581

Report of 1839: "Works are in a most unprotected condition, left in their unfinished state."

Estimate for 1840 - - - - - -	$50,000
Report of 1840: Estimate for 1841 - - - -	$25,000

Report of 1841: "The condition of this harbor is very much impaired since the cessation of the work. Numerous breaches have taken place along the whole line of breakwater. It has suffered, indeed, more than any other harbor on the lake."

State of the account of this work:

Amount expended - - - - - -	$87,000
Estimate to complete - - - - - -	201,000
	288,000

Original estimate, $9,000.

Expenditure exceeds estimate by 866 per cent.

Do and estimate to finish by 3,100 per cent.

GENESEE RIVER.

Appropriations to 1835 - - - - - -	$93,000
Do for 1836 - - - - - -	20,000
Do for 1837 - - - - - -	10,000
Do for 1838 - - - - - -	25,000
	148,000

Original estimate, $54,000.

Report of 1836: "Operations last year confined to repairing those portions of the pier that have been found to subside in the sandy bed of the lake."

Report of 1837: "Top timbers rotten—to be replaced by stone wall."

Estimate for 1838 - - - - - -	$50,000
Do 1839 - - - - - -	60,000
Do 1840 - - - - - -	50,000
	160,000

Report of 1838: Estimate for 1839, $50,000.

Transferred to topographical corps, January, 1839.

Report of 1839: "Work remains in the same condition in which left last year, with the exception of the dilapidations of time."

Estimate for 1840, $51,500.

"The advantages already resulting from this work to the community are now in jeopardy, and can only be secured by a vigorous prosecution of the permanent work."

Report of 1840: Estimate for 1841	$25,000
Report of 1841: Estimate for *completion*	60,000
But the estimate made by Captain Smith, in 1837, for the completion, was	160,000

This work has cost $94,000 more than the original estimate—more than 170 per cent.

Actual expenditure	$148,000
Estimate of 1837 to complete	160,000
	308,000
Original estimate	54,000
Excess of expenditure and estimate	254,000

Being about 470 per cent. over original estimate.

BLACK ROCK HARBOR, NEW YORK.

Appropriations to 1835	$62,000
Original estimate	37,000

Expenditure exceeds estimate by about 70 per cent.

Report of 1836: Estimate for 1837, $9,180.

"Two hundred and twenty feet of the work carried away by the recent gale."

Report of 1839: By this report it seems that the Buffalo and Black Rock harbors are amalgamated. It is therefore impossible to trace further expenditure.

OSWEGO HARBOR, NEW YORK.

Appropriations to 1835	$126,000
Appropriation for 1836	20,000
Appropriation for 1837	15,000
Appropriation for 1838	25,000
	186,000

Original estimate, $33,000.

Report of 1836, (see Ex. Doc. 1836–'37, vol. 1, page 248:) Timber works of the piers entirely rotten; stone wall to be substituted; alteration of the "ultimate profile" of the work recommended, &c. Total estimate for completing, $111,942.

Report of 1837: "Little has been done except repairing the damages sustained by the works last winter." Pavement thrown down in consequence of having been left in an unfinished state; east pier partly washed out; east pier head, in consequence of "*defect of construction*," injured so as

to require "taking down and rebuilding." New estimate for improved mode of laying the stone, &c., for 1838, $46,000.

Report of 1838: Operations of this year confined to finishing masonry commenced last year, repairing decayed wood work, repairing damages on the mole, &c.; a new suggestion of "removing a shoal" is made; and an increased estimate given, for 1839, of $50,000.

Transferred to topographical bureau, January, 1839.

Report of 1839: Paving of the mole, displaced by the action of the waves, repaired; on the 24th of June commenced removing portion of old piers, to be rebuilt in masonry, &c.; change of plan; "a mass of concrete to be substituted for grillage;" six hundred feet of the west pier are necessary to be rebuilt next year; timber rotten, &c. "Large sums must annually be expended in the *repairs* necessary to keep the decayed wooden piers from falling to pieces." The report says: "*True* economy will be consulted by pushing the work forward to its completion with the least possible delay. Estimate for 1840, $57,695.

Report of 1840: Estimate for 1841, $25,000.

Report of 1841: Estimate for 1842, $25,000. "The object now is to replace perishable material by more permanent, as the former is found to give way." (Ex. Doc. No. 2, page 151.) Estimate to complete the work, $168,000. The estimate to "complete" has swollen to this amount, from $111,942, estimated in 1836. The account, then, stands thus:

Expenditures	$186,000
Estimate to complete	168,000
	354,500

Original estimate, $33,000.

Expenditure exceeds the original estimate by more than 460 per cent.

Expenditure and estimate to complete exceed the original estimate by more than 970 per cent.

KENNEBUNK RIVER, MAINE.

Appropriations to 1835	$18,000
Appropriation for 1836	7,500
Appropriation for 1837	3,000
Appropriation for 1838	8,000
	36,500

Original estimate, $6,000.

Report of 1837: "The pier head and a considerable portion of the pier proper are nearly completed."

Report of 1838: "The pier head and about 140 feet of the pier are completed."

Transferred to corps of topographical engineers, January, 1839.

Report of 1839: "The pier head is completed, and about 130 feet of the pier itself; and a quantity of stone is collected, for the continuation of the work." Estimate for 1840, $15,000.

Report of 1840: Estimate for 1841, $15,000. What amount of money will complete the work remains to be ascertained. Expenditure exceeds original estimate by 500 per cent.

CAPE FEAR RIVER, NORTH CAROLINA.

Appropriations up to 1835	$153,000
Appropriation for 1836	20,000
Appropriation for 1837	10,000
Appropriation for 1838	20,000
	203,000

Original estimate, $72,000.

Report of 1836: "The operations of the last year have been confined to dredging on the middle shoal, securing jettee No. 3, and repairing and securing jettee No. 7."

Report of 1838: Estimate for 1838, $30,000; $20,385 being on hand. (Transferred to engineer corps, January, 1839.)

Report of 1839: "To carry out the original design, there remain to be constructed three jettees. Expense, $40,000."

Report of 1840: Estimate for 1841, $20,000.

Report of 1841: "Estimate to finish work, $60,000."

Expenditure exceeds estimate by more than 180 per cent.; expenditure and estimate to complete, by more than 260 per cent.

OCRACOKE INLET, NORTH CAROLINA.

Appropriations up to 1835	$111,700
Appropriation for 1836	9,000
Appropriation for 1837	12,050
	132,750

Original estimate, $58,000.

Report of 1836: "The appropriation not becoming available till late in July, it was considered most prudent to defer the commencement of the work (a merely projected jettee) till next year.

"The price of labor has increased 25 per cent., which of course will increase the cost of the jettee; and $1,800 are asked for, in addition to the funds now available."

Report of 1837: "The jettee recommended in 1835 was commenced in March last, and nearly completed, when a gale in August injured it to such a degree that it was thought inexpedient to proceed with the work."

The engineer recommends a "cessation of the work."

Report of 1838: "Nothing further has been attempted for the improvement of this inlet."

Expenditure exceeds estimate 130 per cent.

HURON RIVER.

Appropriations up to 1835	$29,000
Appropriation for 1836	4,300
Appropriation for 1837	2,565
Appropriation for 1838	5,000
	40,865

Original estimate, $9,413.

Report of 1836: "The appropriation for this harbor was made entirely

for the purpose of repairing the works heretofore injured by the action of the elements. The weather has, as at other works, prevented the repairs to the extent necessary, and which it was hoped before this would have been made."

Estimate for stone piers, $46,770; for repairs of present piers, $2,565.

The report of 1826 told Congress "that the work would be completed in the course of the *next year*."

Report of 1837: "Two hundred and ninety feet of the pier work, which was greatly decayed, have been taken up to below the surface of the water, and rebuilt entirely with new *timber*, filled anew with stone, and principally planked over. The residue will be planked this season. Sixty feet more of the east pier is also taken up, being entirely decayed, and is in process of repair. In addition to these labors, stone in large quantities has been purchased, and placed on the outside of the west pier, as the *commencement* of the construction of a *permanent* work."

Estimate for 1838, $10,175.

Report of 1838: "The labors on this work thus far have consisted: 1st, of repairs rendered absolutely necessary to preserve the present work; 2d, preparations for the erection of *permanent* piers."

Estimate for 1839, $9,300, for commencing "*permanent works*." (Transferred to topographical engineers, January, 1839.)

Report of 1839: "The balance on the 3d of September, 1838, of $3,750, was expended in continuing the work then in progress."

Four estimates are given to complete the permanent work, which average $114,000.

Report of 1840: Estimate for 1841, $18,000.

Expenditure exceeds original estimate by more than 340 per cent; expenditure and estimate of 1839 exceeds original estimate by more than 1,600 per cent.

DELAWARE BREAKWATER.

Appropriations to 1835	$1,530,000
Appropriation for 1836	100,000
Appropriation for 1837	141,000
Appropriation for 1838	150,000
	1,921,000

Original estimate, $2,326,000.

Report of 1836: Original estimate increased by $340,784, for addition of 200 yards to icebreaker. The icebreaker was built, but was found "*not to accomplish its objects.*"

The total cost to complete is stated at $3,030,909, including the $340,784 and the amount then expended; exceeding the original estimate by about $700,000.

Report of 1839: Estimate for 1840	$150,000
Report of 1840: Estimate for 1841	165,000
Report of 1841: Estimate for 1842	150,000

LA PLAISANCE BAY, MICHIGAN.

Appropriations from 1827 to 1834, inclusive, $19,190; original estimate, $6,296.

Report of 1835: "The works were prosecuted to completion this year."

Report of 1839: "The work continues in a progressive state of dilapidation, and if much longer neglected will go to utter ruin."

Estimate to put it in repair, $2,000 or $3,000. Expenditures exceed original estimate by more than 200 per cent.

RIVER RAISIN, MICHIGAN.

Appropriations from 1836 to 1838, both inclusive, $90,000; original estimate, $55,885, exclusive of its proportion for building a dredging machine.

Report of 1839: Estimate to complete work, $74,281.

Estimate to render harbor permanent, $15,327; estimate to render piers permanent, average of four modes, about $80,000. Expenditure exceeds original estimate by more than 60 per cent.; expenditure and estimate to complete (1839) exceeds original estimate by more than 190 per cent., and then the work will not be permanent.

ASHTABULA CREEK, OHIO.

Amount of appropriations from 1836 to 1838, inclusive, $64,149; original estimate, $21,343 75.

Report of 1839 gives four estimates to complete the work, averaging $78,000.

Expenditure exceeds original estimate by more than 200 per cent.; expenditure and estimate to finish exceed original estimate by more than 570 per cent.

VERMILION HARBOR, OHIO.

Appropriations from 1836 to 1838, both inclusive, $53,626; original estimate, $61,563; second estimate, (1838,) $74,342.

Report of 1839: Estimate to complete the two piers, $27,811. Estimate of *permanently* improving the harbor, average of seven modes, $140,000.

RED RIVER, LOUISIANA.

Appropriations up to 1835	- - - - -	$147,688
Do.	for 1836 - - - - -	40,000
Do.	for 1837 - - - - -	65,000
Do.	for 1838 - - - - -	70,000
Do.	for 1841 - - - - -	75,000
		397,000

Original estimate, $25,000.

Report of 1836: "This year 21 miles of the raft have been removed, leaving 9 miles yet to be taken out."

The report of 1835 states that 23 miles only remained to be removed; it had increased in one year 7 miles.

The superintendent says: "I shall probably accomplish the removal of the remainder of the raft by April next," (1837.)

Estimate to build a boat and finish the work, $45,000.

Report of 1837: "There now remains of this obstruction but 440 yards. Estimate to complete the work, $65,000—for removing rest of the raft, for snagging, removing and felling trees, &c.

Report of 1838: A new raft formation, extending along the river about one mile and a half, is reported.

Estimate for 1839: For snag-boat, $30,000.

Report of 1839: New formations removed. This and subsequent reports refer to the general improvements of the river in the vicinity of the removed rafts, &c.

Report of 1840: Estimate for 1840, $85,000, including $11,169, bill due for work in 1839.

In April, 1839, the navigation was opened. In July following, a new raft was formed; it was removed. In a few weeks another raft was formed, about one mile in length. "The navigation is now closed, and will, in all probability, remain so until *further* appropriations be made by Congress for completing the work."

List of public works, original estimate of cost, expenditure, and estimate to complete them.

Works.	Original estimate of cost.	Expenditure.	Estimate to complete work.	Remarks.
Conneaut creek -	$20,000	$43,000	$70,000	Round numbers.
Cunningham creek -	2,000	20,000	22,000	
Grand river -	15,000	55,000	82,000	
Cleveland harbor -	10,000	123,000	66,000	
Chicago harbor -	59,000	188,000	216,000	
Big Sodus bay -	72,000	138,000	50,000	For 1839 only.
Provincetown harbor -	3,000	41,000	16,000	
Plymouth beach -	43,000	52,000	2,000	
Black river, Ohio -	25,000	63,000	90,000	
Presqu'isle -	40,000	142,000	324,000	
Dunkirk harbor -	9,000	87,000	201,000	
Genesee river -	54,000	148,000	160,000	
Black Rock harbor -	37,000	62,000	–	In 1839 amalgamated with Buffalo harbor.
Oswego harbor -	33,000	186,000	168,000	
Kennebunk river -	6,000	36,000	–	No estimate to complete.
Cape Fear river -	72,000	203,000	60,000	
Ocracoke inlet -	58,000	132,000	–	No estimate to complete.
Huron river -	9,000	40,000	114,000	
La Plaisance bay -	6,000	19,000	–	No estimate to complete.
River Raisin -	55,000	90,000	74,000	
Ashtabula creek -	21,000	64,000	78,000	
Vermilion harbor -	61,000	53,000	140,000	
Red river - -	25,000	397,000		
	735,000	2,382,000	1,933,000	
			2,382,000	
		2,382,000	4,315,000	
		735,000	735,000	
		1,647,000	3,580,000	

I.

TREASURY DEPARTMENT,

Fifth Auditor's Office, January 25, 1841.

SIR: Your letter of the 18th instant, transmitting your account and vouchers for light-house disbursements for the fourth quarter, 1840, has been received. So soon as the account can be examined, you shall be informed of the state of it.

When authority was given to refit the Cape Cod light-house, during the last year, with a new lantern and new lamps, with 21-inch reflectors, I did not suppose the expense would be greater than that I agreed to give Mr. Winslow Lewis for furnishing a new lantern, new lamps with 21-inch reflectors, and putting them up on the Cape Henlopen light-house, both of them being stationary lights. On examining the different items of expense, however, for refitting the Cape Cod light, contained in your September quarterly account, I discover that the Cape Cod light cost $2,319 more than was paid to Winslow Lewis for refitting the Cape Henlopen light.

The items in relation to Cape Cod are as follows:

Paid Hooper & Co., for 15 21-inch reflectors, 96 and 15 lamps, at $7 each, making - - - - -	$1,545 00
Paid the same, for yokes, racks, pinions, &c. - -	133 39
Paid F. Alger, for new lantern, chandelier, staircase, &c. -	2,377 98
Paid Mr. J. W. P. Lewis, for expenses of putting up lantern, &c. -	1,862 64
	5,919 01

Now, the sums paid Winslow Lewis for refitting Cape Henlopen light-house were as follows, viz:

For turning a brick arch, and putting a new soap-stone deck on it - - - - - - - -	$500 00
For a new lantern the size of the old one, but glazed with plate glass, 24 inches by 16 inches - - - -	1,400 00
18 lamps and 18 21-inch reflectors, with a new chandelier, railing around the lantern, &c. - - - -	1,600 00
	3,500 00
To this was added, for a temporary light - - -	100 00
	3,600 00

The only difference in the work at the two places which I have been able to discover is the flight of cast-iron steps at Cape Cod, which were unnecessary at Cape Henlopen, and three lamps and large reflectors furnished at the latter more than were supplied at the former place.

I regret to discover this great difference in the cost of the two lights, for there cannot be a better stationary light than that at Cape Henlopen; it having been seen, according to the testimony of pilots, a distance of thirty-five miles, in clear weather. It shows the necessity, however, most clearly, of doing all this kind of work by contract, and of inviting proposals from all those who can do the work satisfactorily.

I perceive that Messrs. Hooper & Co. have charged one hundred and three dollars for each lamp and 21-inch reflector, whilst Mr. Lewis's charge does not exceed eighty dollars.

I am, &c.

S. PLEASONTON.

GEORGE BANCROFT, Esq.,
Superintendent of lights, Boston, Mass.

Extract of a letter from the Fifth Auditor to Levi Lincoln, superintendent of lights at Boston, Massachusetts, dated September 18, 1841.

I received yesterday your letter of the 15th instant, accompanied by Captain Howland's journal, and the receipts of the keepers for articles delivered by him in his late cruise from North Carolina to Maine.

In glancing my eye over the journal, I was struck with the extraordinary consumption of oil at the Cape Cod light-house, it being no less than sixty-eight gallons per lamp for the last year, and being more than twice as much as was consumed per lamp at Cape Henlopen for the same time—the latter consuming only thirty-three and a half gallons. Now, the Cape Henlopen light-house had a new improved lantern put on it last year, and was fitted up with new improved reflectors, 21 inches diameter; and we are credibly informed that the light can be seen thirty-five miles in clear weather, which is as far as necessary. The Cape Cod light* had a new lantern also, with the large reflectors, put on it last year. The difference in the consumption of oil must be occasioned by much larger burners being used in the lamps of the Cape Cod light-house, and which are proved to be unnecessary, as the light at Cape Henlopen is entirely satisfactory.

Be good enough to inquire into this matter, and particularly whether the burners of the size heretofore in use would not afford a satisfactory light at Cape Cod, and effect a saving of four or five hundred gallons of oil a year.

J.

BUOYS NEAR NEW YORK.—*(From the Fifth Auditor.)*

Expenses of replacing, recovering, repairing, mooring, and taking care of buoys, in the district of New York.

For the quarter ending 31st of March, 1838 - - -	$520 53
For the quarter ending 30th of June, 1838 - - -	587 72
For the quarter ending 30th of September, 1838 - -	225 00
For the quarter ending 31st of December, 1838 - -	1,389 10
Amount for the year 1838 - - - -	2,722 35

* This light-house had a new lantern and new lamps, and reflectors 21 inches diameter, put on it by J. W. P. Lewis, of Boston.

For the quarter ending 31st of March, 1839 - - -	$904 72
For the quarter ending 30th of June, 1839 - - -	1,719 34
For the quarter ending 30th of September, 1839 - -	843 43
For the quarter ending 31st of December, 1839 - -	1,185 94
Amount for the year 1839 - - - -	4,653 43
For the quarter ending 31st of March, 1840 - - -	None.
For the quarter ending 30th of June, 1840 - - -	$1,075 64
For the quarter ending 30th of September, 1840 - -	440 80
For the quarter ending 31st of December, 1840 - -	180 25
Amount for the year 1840 - - - -	1,696 69
For the quarter ending 31st of March, 1841 - - -	$651 22
For the quarter ending 30th of June, 1841 - - -	787 23
For the quarter ending 30th of September, 1841 - -	112 50
For the quarter ending 31st of December, 1841 - -	398 14
Amount for the year 1841 - - - -	1,949 09

K.

TREASURY DEPARTMENT,

Fifth Auditor's Office, May 6, 1842.

SIR: I have only this moment had the honor to receive your letter of the 3d instant, it having, I presume, been sent to the post office.

In answer to the question, what amount of money, if any, has been lost to the public, in the light-house department, since you (I) have had charge of it, and the names of those through whose fault such losses occurred, I have the honor to state that, during the 22 years I have been charged with the management of the light-house establishment, but one instance of loss has occurred, and that was in the person of Mr. Francis S. Shearman, of Michigan, who was appointed by the Secretary of the Treasury superintendent of light-houses on Lake Michigan (there being no collector on the lake) in 1840; and a sum of $2,276 53 having been remitted to him to pay the expenses of the last quarter of that year, he failed to account for the same. A suit was accordingly ordered, and in November, 1841, his counsel forwarded vouchers to the amount of $1,159 51, with which he was credited, reducing the claim of the United States to $1,117 02; and this sum we have evidence to show is lost, Mr. Shearman being insolvent.

In all other instances, revenue officers have been appointed superintendents of light-houses, and no loss whatever has been experienced by the United States.

In the large ports, the collectors pay the light-house expenses out of moneys in their hands, and, on the settlement of their accounts at the Treasury, the sums are debited to the proper appropriation; and where the collectors do not receive sufficient revenue to pay those expenses, remittances

have been made to them from the Treasury, and no loss has ever been sustained, their bonds affording security for the application of the money.

I have the honor to be, very respectfully, sir, your obedient servant,

S. PLEASONTON.

Hon. JOHN C. CLARK,
Committee on Commerce, Ho. of Reps.

L.

TREASURY DEPARTMENT,
Fifth Auditor's Office, April 30, 1842.

GENTLEMEN: I observe by a speech made by a member of the House of Representatives, reported in the Intelligencer of this morning, in advocating a transfer of the general superintendence of the light-house establishment from this office, by which it has been conducted for the last twenty-two years, to the Engineer department, that he has been misled into many errors, which I feel it my duty to correct, not only in vindication of my own character, but in justice to the public service. They may be enumerated under the following heads, viz:

1st. He states that the large amount ($195,357) contained in the estimate for repairs, is, under the present organization, exclusively controlled by the Fifth Auditor, who can expend it where he pleases, and can apply it to any part of the coast—to Massachusetts, to New York, the Chesapeake, or to Florida. It is hardly necessary to say that the Fifth Auditor, in disbursing this money, must be governed by the wants of the service, let it be either in Florida or Maine; and if no repairs be necessary on any part of the coast or lakes, not one dollar would be expended, but would remain in the Treasury.

2d. He asserts "that the reason so large a sum is required for repairs is that the light-houses, as originally constructed, are so entirely unfit to withstand the elements, and erected upon plans so entirely at variance with scientific skill, that it requires a vast amount annually to keep them in any thing like habitable order." Now, so far from this being the fact, all the light-houses that I have caused to be built were planned by men perfectly acquainted with the subject, and consist generally of four classes, viz: the largest class are sixty-five feet high, diameter twenty-five feet at base, graduated to twelve feet at the top; the walls five feet at base, graduated to two feet at top; deck fourteen feet; lantern sufficient to contain twenty-one lights, fourteen by twelve inches. The second class are fifty feet high, twenty-two feet diameter at base, eleven feet at the top, deck thirteen and a half feet; walls four feet thick at base, two feet at top; lantern sufficient to contain twenty-one lights, thirteen by twelve, in each octagon. The third class is forty feet high, twenty feet diameter at base, ten feet at top, deck eleven and a half feet; walls three feet six inches thick at the base, twenty-two inches at the top; lantern sufficient diameter and height to contain eighteen lights, twelve by eleven, in each octagon. The fourth class is thirty feet high, eighteen feet diameter at the base, nine feet at the top, deck ten and a half feet; walls three feet thick at the base, graduated to twenty inches at the top; lantern sufficient diameter and height to contain eighteen lights, twelve by ten, in each octagon. We have sometimes built

beacon lights from fifteen to twenty-five feet high, but they are seldom adopted. A particular description, in each case, is given in the advertisements for proposals to erect the buildings. They have been built of brick or stone.

Experience has shown that a light-house higher than sixty-five feet, in all our Southern country, where the coast is low, would be entirely useless, as, during the summer months particularly, a haze or mist is found to arise from the ground and float in the air at the distance of eighty or ninety feet; and by having a light-house sixty-five feet, with a lantern ten feet, the light appears below the mist, and is seen with its natural brilliancy at a great distance at sea; whereas, if the tower was carried one hundred feet high, or more, the light would be entirely obscured. On the highlands of Cape Cod, and at Gay Head, the light-houses, which were built of the first class, had to be taken down fifteen feet each, in order to avoid the mist, and present a good light.

The light-houses built according to the above plans do not require repair because they are badly built, but because, to make them at all useful, they must be placed on prominent *points near the water;* and although, when built, no danger is apprehended from the water, yet, contrary to all reasonable calculation, the violent storms, which almost every season visit our seaboard, force the water upon their sites, threatening to undermine the buildings, so as to render it necessary, frequently, to put breakwaters around them, or remove them, at an expense very little less than the first cost. If they were built of adamant, the effect would be the same; so that the honorable member is entirely mistaken in supposing that it is owing to the manner in which the houses are built. I have visited a large number of those houses myself, from Boston to New York, and thence into the Delaware and Chesapeake bays, and I pronounce the buildings generally well made.

3d. What is said concerning the reports of the officers of the navy, who were appointed to examine the light-houses in 1838, I shall pass over, as these reports have been before Congress and the public for several years, with the single remark, that I regret to perceive the desire to impugn the management of the establishment unjustly, from the fact that the same report from which is quoted Lieutenant Manning's remark, "eight out of nine keepers complained of their oil being thick, and burning badly," contained my remarks correcting this gentleman's errors in regard to the oil, which are not noticed by the speaker. The expressions used by Lieutenant Manning opposite each light-house, where he mentioned oil, were, "oil in the winter complained of as bad." This he did because the oil congealed in winter; he having fallen into the common error of believing all oil to be bad that congealed in cold weather. My remarks, in the report, went fully to correct this error; and I now subjoin a copy of the certificate upon this subject, from eight of the most respectable oil dealers at New Bedford, (No. 1,) to which I then referred, going to prove that all oil would congeal when the mercury in Farenheit's thermometer descended as low as twenty-four degrees. Whilst on the subject of oil, it is proper to correct an error into which the speaker has been led, and of which he speaks in another place, to wit: that I had directed the collector at New York, by way of testing a quantity of oil which he had then purchased, to burn some of each cask before it was received and paid for. The certificate of the New Bedford merchants, before alluded to, goes to show that different whales produce different qualities of oil; and although the oleometer will show the

purity of the oil, it will not show its quality; and there is no other way of ascertaining whether it is good than by burning it. I have, consequently, ordered all the oil to be tested, not only with the obometer, but by burning it also, before we receive and send it to the light-houses.

The contract with Messrs. Morgan & Co., of which mention is made, was dissolved some years ago, and I have subsequently had all the oil and other articles connected with lighting the light-houses procured by the collector at Boston, of the best quality, and sent annually to the different light-houses on the seaboard as well as the lakes.

Whatever may have been the condition of the light-houses, as shown by the navy officers in the report referred to, the Committee on Commerce are now in possession of reports from all our superintendents, and from Captain Howland, of a subsequent date, calculated to remove any erroneous impressions upon this subject.

4th. The Whale's Back light house is stated to have been built in 1829, "at a cost of $13,000, and had to be cased over with wood in 1831, at a cost of $6,150, in consequence of the scandalous manner in which the original contractor erected his work, and to prevent the keeper from being drowned out by the sea washing through all the crevices." Now, the truth is, that the foundation of this light-house, which was forty-eight feet diameter at the base and forty-four feet at the top, and twenty-two feet high, of very strong stone work, cost $13,810 33; and the tower which was erected on it cost $6,150—making, altogether, $19,960 33. It was not until 1837 that any sheathing was put around it, and that only upon the part upon which the spray of the sea dashed, the light-house being built upon a rock in the ocean; and this was done for the comfort and health of the keeper, and at the inconsiderable expense of $307 38.

The light-house, though the plan was an excellent one, and if carried fully into effect would have endured for ages, was, in one respect, infamously built; and that was fatal to the whole structure. The contract provided that the rock on which it was built should be reduced to a perfect level, and that all the bottom stones, to be of the large size, should be bolted to it; instead of which, the then superintendent, whom I shall not name, suffered the contractors to lay the stone upon the uneven surface of the rock, and fill up the crevices with small stones, easily washed out; and the water, once getting access, progressed to undermine the work in such a manner that I expected it would have fallen two or three years ago. Congress appropriated $20,000 to put a breakwater around it; but, on getting Colonel Thayer and Mr. Parris, of Boston, to examine the work, they recommended the erection of a new light-house, on the plan of that at Eddystone, alleging that no breakwater could secure the present building. The appropriation was consequently not expended. Accordingly I had a plan and estimate, with a model, prepared by Mr. Parris, and submitted the same to Congress on the 20th December, 1838, and recommended that the necessary sum of $75,000 be appropriated for the purpose of erecting a new and substantial building. No appropriation, however, has been made, and I am in daily expectation of information that the present building has been demolished by the force of the sea.

5th. It is stated that the collector at Key West visited the light-house at Cape Florida, after it was burnt by the Indians in 1836, (not 1835,) and found the walls of the tower, instead of being solid, were hollow from the base upwards, by which fraud about one-half of the bricks and materials

required to erect a solid wall were thus saved, to the benefit of the contractor.

However this may be, every precaution was taken by this office to ensure the erection of a substantial building of the first class. The contract entered into by Collector Dearborn, at Boston, with Samuel B. Lincoln, required him to build a tower sixty-five feet high, of solid walls of brick, five feet thick at the base, graduated to two feet at the top; and Mr. Dearborn was directed to appoint a respectable and suitable mechanic to proceed to Cape Florida to oversee the materials and work; and he appointed Noah Humphreys, of Hingham; and, when the work was finished, he certified on the contract as follows:

"CAPE FLORIDA, *December* 17, 1825.—This is to certify that the light-house and dwelling-house on Cape Florida are *finished* in a workmanlike manner, agreeably to the within written contract.

"NOAH HUMPHREYS."

Here, then, is a contract requiring a strong, durable building to be erected, with a man to superintend it of respectable character in his neighborhood, and accustomed to work in brick and mortar, certifying that the work is faithfully done. I know of no better mode of securing fidelity in contractors; for, if the ablest engineer in the country were appointed to superintend the work, there would be an increased expense, without a tithe more of security that the work would be well done; and these remarks may be applied to all the light-houses which have been or will hereafter be built.

6th. *Removal of the light-house at Stonington, Connecticut.*—From all the information I could obtain, I considered it better to erect a small new building on an adjoining lot, secure from the action of the sea, than to put a breakwater around the old buildings, which, in all probability, would protect them but a few years, and the cost would certainly have been equal to the erection of new buildings. The building serving for both light-house and dwelling for the keeper was therefore erected, under contract, for $2,840, with an expense of $168 to the overseer of the work—making for the cost of the building $3,008, and for new lantern, fitting up, &c., $1,906—being, altogether, a cost of $4,914. The old buildings and lot are not worth $1,500, as stated, but are valued at about $800. To dispose of the lot, however, requires an act of Congress, and it has not been sold on that account.

7th. *The Lynde Point light, or Saybrook, as it is called.*—The first wall placed around this light-house was in 1829, and cost not $3,000, as stated, but $380; and in 1831 it was enlarged and repaired, at an additional expense of $825. In the summer of 1840 the superintendent represented the necessity of additional works being put around it, and a contract was entered into, and the work performed for $2,500. It does not appear that this light-house, to be useful, could have been located any where else.

8th. The next cause of complaint is, that the beacon on Bowditch's ledge, one in Manchester harbor, and at Black Rock, were carried away by storms, and had to be rebuilt at considerable expense. This is entirely true; and the cause of all this disaster was submitted to Congress, and special appropriations made to rebuild them, without any censure being cast upon this office. Indeed, no man who had any knowledge of the storms which demolished these beacons, even with the most evil designs, could attach any blame either to the superintendent or contractors who built them. For the

information of the member, and all others who may feel an interest in the subject, I subjoin an extract (No. 2) of a letter from the superintendent of our light-houses in Maine, the latter clause of which is as follows: "The officers of the cutter just returned from Mount Desert Rock informed me that they there measured one stone that was thrown out of its place by the sea, and found it 18 feet long, 14 feet wide, and 6 feet thick, weighing about 57 tons."

9th. *The beacon on the Romer.*—The committee are already furnished with the facts in regard to the building, and for the location of the beacon they are respectfully referred to a report made to this office by Mr. Hoyt, and laid before Congress by the Secretary of the Navy, (1st sess. 26th Congress, Doc. No. 167,) and a report by the Secretary of the Treasury to the President, who approved of the location. This latter report and approval are subjoined. (No. 3.)

10th. What is said about the deficient number of lamps at several light-houses on Cape Cod may be met by the observations of Lieut. Carpenter, laid before Congress and published in 1838. Instead of increasing the number, he was for diminishing it in many instances; but, upon the remonstrances of persons interested, no alteration was made, the lights being satisfactory.

Whilst on the subject of the lights, it may be as well to say, what I intended to say in another place, that all our lights on our seaboard, with two or three exceptions, from Boston to Savannah, have, within the last two or three years, been fitted up with new lanterns containing large plate glass, and with reflectors made like the English, in moulds, 21 inches in diameter, affording a light which is seen, in clear weather, from 30 to 35 miles. Our bay and sound lights, too, though not fitted up with the improved reflectors, but are well fitted up with the old, afford a light which can be seen from 10 to 20 miles. According to the official accounts both from the British and French Governments, their best lights are seen no further than ours, and their inferior lights, particularly those in France, are not seen so far.

11th. *The extravagant cost of the French lenses.*—The causes which led to extraordinary expenses in this case have been explained in my letter to the committee of the 28th December last. The cost, however, is not so great by $3,233 42 as is alleged in the speech, it being $26,169 58. It is alleged, too, that the accounts passed this office without demur. The men who furnished this information to the speaker in question ought to have known that this was untrue, as it seems they had access to the custom-house accounts and letters at New York, and among them was one from me to Mr. Hoyt, (complaining of the cost of a lantern made there, which was $3,930—not $5,010, as stated,) and Mr. Hoyt's answer. These papers are annexed, for the information of the committee. (No. 4.)

The greatest error Mr. Hoyt seems to have committed in putting up these lenses was the employment of Mons. Chapdelaine, from the store of Messrs. Blunt, as the interpreter of Mons. Bernard, the French artisan, who could speak no English; and I have no doubt that Mr. Chapdelaine was disposed to encourage every sort of expense which could increase the cost, with the view to this very complaint; and nothing can show more clearly the deep-rooted hostility of these men, whom I once before exposed, than this transaction. If any engineer offered to assist the French artist gratuitously, I have no recollection of it. Mr. J. W. P. Lewis applied to me for

authority to assist him; but, as he could neither speak French nor would work without pay, (for I am pretty sure he asked me five dollars a day,) I referred him to Mr. Hoyt, to whom it was necessary to refer every thing of this kind, not knowing myself what aid the French artisan might require.

12th. *Cutter Rush, purchased as a light-house and buoy tender.*—Before the purchase of this vessel from the Secretary of the Treasury, at the inconsiderable sum of $2,819, in May, 1840, we were obliged to pay the pilots of New York, after advertising for proposals, the sum of $2,000 a year, for taking up and mooring the buoys alone—the United States being at all the expense of procuring new ones and repairing old ones. This vessel not only performs the service of taking care of the buoys, but conveys the oil, wick, tube glasses, &c., to the different light-houses, men and materials with which to make the repairs to the light-houses, and also the collector on his tour of inspection. She is constantly employed in the summer, at a quarterly expense of $551; and in the winter she is laid up in dock, with one seaman to take care of her. Such a vessel is necessary at New York; and if Congress were to allow me two others, for different stations, the service would be promoted by it.

13th. *Expenses of the light ship off Sandy Hook.*

It is stated that the cost of this ship, in 1823, was - -		$17,702 33
Repairs in 1831 - - - - - -		6,157 28
Maintenance to 1838, at $6,500 per annum, 15 years -		97,500 00
		121,359 61
Now, the truth is, that she cost, as stated	$17,702 53	
Maintenance from 1823 to 1829, 6¼ years -	23,015 71	
Being $3,682 on an average, and not $6,500.		40,718 24
Overcharged - - - - -		80,641 37

On the completion of the Neversink lights, in 1829, this vessel was directed by law to be transferred to another station, and was transferred.

Another was built and moored off Sandy Hook in 1838, and has since been maintained at a considerable expense—the vessel having broken from her moorings twice or thrice, and lost most of them, which cost several thousand dollars, in addition to heavy expenses for repairs, on those occasions; so that in four years her expenses amounted to $24,849 52. This, however, is a vessel of a large class, being two hundred and fifty tons burden, and requiring the services of nine men besides the captain.

The decay of the first light vessel built for Carysfort reef was very extraordinary and unaccountable. She was built in New York, by Henry Eckford, under the superintendence of an experienced shipbuilder, and examined from time to time, while building, by the collector, Jonathan Thompson, Esq.; and I saw the vessel myself after her timbers were up, but before she was planked; and every other person who saw her pronounced her a very superior vessel in every respect. She was sent to her station at Carysfort reef, and in five years she was examined, and found so entirely dry-rotten, in every timber, that a new vessel was found to be neces-

sary to take her place. An appropriation was accordingly made by Congress, and another built. This is also a vessel of two hundred and fifty tons burden, and has been, as she always must be, a very expensive vessel. The whole expense of maintaining this vessel at her station, from the year 1825 to the close of 1841, was seventy-nine thousand nine hundred and fifty-eight dollars and thirty-one cents; being an average of four thousand two hundred and thirty-two dollars per annum. In this sum is included nineteen thousand four hundred dollars for repairs, moorings, and coppering, and one thousand two hundred and eighty dollars for a schooner-rigged tender, with which to supply the ship with provisions, &c., there being no revenue cutter on the station.

There is no way, however, of judging of the economy or extravagance in these cases, but by a comparison with those in the service of other countries, and I know of no other country which employs floating lights than Great Britain. Being in possession of a list of the British floating lights, and the expense of each, for the year 1838, as laid before Parliament, I now proceed to make a comparison of the expenses of them and the American floating lights for the same year, viz:

Floating lights.	Pounds sterling.	Dollars.
Nore floating light, maintenance -	1,347 11 7	6,562 71
Wall or Dudgeon floating light, maint'ce	1,072 5 4	5,221 94
Owers, one floating light, maintenance -	1,227 11 0	5,978 17
Goodwin, do do -	3,034 7 2	14,777 32
Gull, do do -	1,177 9 6	5,734 30
Sunk, do do -	5,943 7 11	28,944 34
Galloper, do do -	1,113 15 8	5,424 12
Spurn, do do -	1,081 10 1	5,268 92
Lynn Well, do do -	1,006 19 2	4,903 88
Haisborough, do do -	1,198 16 8	5,838 32
South Sand Head, do do -	1,467 7 5	7,146 09
Swin Middle, do do -	1,024 12 2	4,989 84
N. E. Shipwash, do do -	873 4 3	4,252 59
St. Nicholas Gatt, do do -	849 15 1	4,138 30
Bristol Channel, do do -	1,175 3 0	5,722 98
	23,593 16 0	114,903 77

Average cost of maintenance, $7,660 25.

List of American floating lights, and the expense of maintaining them, including repairs, from 1st July, 1837, to 1st July, 1838.

In what States.	Names of superintendents.	Number and names of floating lights.	Amount.
Massachusetts -	John P. Norton -	1 floating light, Tuckanuck Shoals, exp's, includ'g keeper's sal'y	$2,403 25
Connecticut -	I. W. Crawford -	1 floating light, Bartlett's Reef, do do do	2,378 84
New York - -	Jesse Hoyt -	2 floating lights, Stratford Point, expenses, including keeper's salary, $2,301 06.*	
Do - -	Do - -	Sandy Hook, expenses, including keeper's salary, $1,594 89.*	
Delaware - -	Henry Whiteley -	3 floating lights, Five Fathom Bank, exp's, incl'g keeper's salary	3,631 96
Do - -	Do - -	No. 1. Brandywine Shoal, do do do	2,318 82
Do - -	Do - -	No. 2. Upper Middle Shoal, do do do	2,968 29
Maryland - -	William Frick -	1 floating light, Hooper's Straits, do do do	1,979 46
Virginia - -	C. Whittle -	5 floating lights, Craney Island, do do do	1,822 24
Do - -	Do - -	Willoughby's Spit, do do do	3,163 86
Do - -	Do - -	Wolf-Trap, do do do	3,803 70
Do - -	Do - -	Windmill Point, do do do	2,824 62
Do - -	Do - -	Smith's Point, do do do	2,974 75
Do - -	Robert S. Garnett -	1 floating light, Bowler's Rock, do do do	1,574 50
Do - -	George Brent -	2 floating lights, Lower Cedar Point, do do do	1,693 22
Do - -	Do - -	Upper Cedar Point, do do do	1,102 08
North Carolina -	Sylvester Brown -	6 floating lights, Long Shoal, do do do	2,011 15
Do - -	Do - -	Royal Shoal do do do	2,001 84
Do - -	Do - -	Nine Feet Shoal, do do do	2,026 61
Do - -	Do - -	Neuse River, do do do	1,880 43
Do - -	Do - -	Brant Island, do do do	2,117 88
Do - -	Do - -	Harbor Island, do do do	1,975 45

Do - -	G. W. Charles and D. M. McDonald	3 floating lights,	Wade's Point,	do	do	do	1,973 75
Do - -	Do - -		Roanoke Island,	do	do	do	2,351 44
Do - -	Do - -		Roanoke River,	do	do	do	2,333 13
Florida - -	W. A. Whitehead and A. Gordon -	2 floating lights,	Carysfort Reef,	do	do	do	4,277 61
Do - -	Do - -		Key West, xp's, incl'g keeper's salary, $461 34.†				
Michigan - -	Abraham Wendell	1 floating light,	Louis McLane, junction of Lakes Huron and Michigan, expenses, including keeper's salary - -				2,401 07
		25 floating lights, (average $2,399 59 4/5)			- -		59,989 95

* The two floating lights in New York district are not included, the expenses being but for a part of the year.
† The Key West floating light not included, being but for a part of the year.

It will be seen, by the above statements, that the average expense of the British floating lights for 1838 was $7,660, and that the average expense of the American floating lights, which, in general, are larger than the British, is $2,399 only; and yet I undertake to assert, without the fear of contradiction, that our floating lights are better adapted for the purpose than the British, and that the lights are seen (whilst the Trinity Board state theirs to be seen nine miles only) from ten to fifteen miles. A comparison of the drawings of both nations, which I have in my office, will convince any person of the superior excellence of our plan.

The most remarkable part of the speech is that in which the member asserts that I audit the light-house accounts. Now, it is very well known, to almost every person connected with the Government, that I do not act as an Auditor in regard to the light-house duties, but ministerially; and that when the accounts are received here, from the different superintendents, they are, if correct, entered in books in my office, and afterwards transmitted, with the vouchers, to the First Auditor, who audits and sends them to the First Comptroller, by whom, after approval, they are sent to the Register, entered on his books, and there filed. They do not return to me.

The assertion that there has never been connected with the light-house establishment a single officer or attaché of any kind that could lay the slightest claim to a knowledge of architecture or engineering, nor one capable of selecting and afterwards surveying the site of an intended light-house, is calculated to mislead the public. I have never had, and do not wish to have, an engineer, or other attaché, employed by the year, at a heavy expense, when it is only occasionally I have had use for one; and on those occasions I have employed, for a moderate sum, men of as much practical knowledge of light-houses and submarine works as any others in the country.

The plans of light-houses, of four classes, before described, were devised many years ago, by experienced and practical men, and the plans will speak for themselves; and as to locating light-houses, the proper collector of the customs, always an intelligent man, has been charged to view the ground on which a light-house was to be built, and, with the advice of such retired captains of vessels and pilots as he could call to his aid, determine on the proper spot on which to place the light-house. There can be no better mode devised, in my opinion, for obtaining a proper location. The lights are often necessarily placed in low and marshy situations, to which in time the sea gains access, and renders it necessary to remove the buildings or place breakwaters around them. I have generally preferred the former, as breakwaters cannot be relied upon for security for more than a few years. It must be obvious to every man at all acquainted with our coast, and the storms which prevail upon it, that the annual expenses of protecting and securing the light-houses must always be considerable.

As instances of the insecurity of the lights on the coast, it is proper to mention that I have just received a communication from the collector at New London, stating that the light-house at that place, which was built in 1800, upon a rock, now requires protection, the sea having approached it, and loosened several of the foundation stones; and also that the light-house on Sand Key, near Key West, built in 1826, on an island of sand of some acres in extent, is now in danger of being swept off by the action of the sea,

and the island with it. I have had a temporary protection put around this last; but unless Congress make an appropriation of $16,000, for which I called* more than a year ago, it will be destroyed.

I have, in a preceding part of this letter, shown that our light vessels, though very expensive, and must always be so, are not more than one-third of the expense annually, including repairs, of the British light vessels; and having shown, in several communications I have heretofore made to Congress and the Committee on Commerce, that our light-houses do not, on an average, cost half as much as the British or French, so far as we can ascertain the expenses of the latter, it is all that I can do to prove the economy observed in the administration of our light-house department; and as to the efficiency of the lights of both descriptions, it has never been questioned by men who are really interested in it, but, on the contrary, testimony of the highest character, from captains of ships and pilots, and others interested in navigation, has been from time to time received, of the brilliancy of all our lights on the seaboard.

Our light-houses and light vessels have been the subject of so much misrepresentation, within a few years past, by persons having no immediate interest in their welfare, and particularly at the present session of Congress, and many members been impressed with erroneous opinions concerning them, that I am induced, respectfully, to ask that the House of Representatives will appoint a committee of its members for the purpose of inspecting them, from Passamaquoddy to the Sabine, or such portion of the coast as they may find it convenient to visit, promising, on my part, either to charter a vessel for their use, or fit up the cutter "Rush" in a suitable manner for the purpose. On their report I am perfectly willing that the present system shall stand or fall.

On the subject of the light-houses which, it has been alleged, have fallen down in consequence of being badly built, I will write to the committee in a few days—it having required, and still requiring, much research to obtain the necessary information, distributed among a mass of papers, covering a period or more than twenty years.

I have the honor to be, gentlemen, your most obedient servant,

S. PLEASONTON.

Hon. JOHN P. KENNEDY, *Chairman, &c.*

No. 1.

We, the subscribers, residing in New Bedford, and being manufacturers of oil, do hereby certify that winter pressed oil, from head matter, will not, in general, remain limpid below a temperature of from twenty-four to thirty degrees of Farenheit, and that we consider oil which will remain fluid at thirty degrees fair merchantable oil.

We also certify that summer oil will not remain fluid below a temperature of from forty to fifty degrees of Farenheit.

We also certify that the oil from different whales is often of different

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* The letter on this subject was addressed to Mr. Curtis, as chairman of the Committee on Commerce, and dated February 20, 1841.

quality, and that we know of no mode of testing this difference of quality but by the burning of the oil.

GEO. HOWLAND.
WM. T. RUSSELL.
WM. S. HAWES.
WM. H. HATHAWAY.
ISAAC HOWLAND & CO.
WM. W. SWAIN.
ALEX. H. CAMPBELL.
LAWRENCE GRINNELL.

NEW BEDFORD, *March* 2, 1838.

No. 2.

Extract of a letter from John Anderson, collector for the district of Portland and Falmouth.

By reports received at this office from the keepers of the lights on Mount Desert Rock, Boon Island, and Moose Peak Head, I learn that these establishments have sustained considerable injury from the heavy sea of the 27th January. The sea broke over the whole of Mount Desert Rock, and swept every thing off except the house, and that was filled with water, rocks, and gravel, the door stove in pieces, and the keeper driven to the lantern for safety, and most of his personal property destroyed.

At Boon Island, the keeper was driven from the dwelling-house into the tower of the light-house; the doors of the dwelling-house and tower stove, the boat slip and oil-house greatly injured, and the rocks so removed as to let the ordinary tides now reach the dwelling-house.

The dwelling-house at Moose Peak was filled with water, stone, and gravel; the walk to the tower washed away, glass broken out of the lantern, the stones of the deck started, and the clock work thrown out of gear. The keepers of all these establishments have, by great exertions and perseverance, so far repaired the damages as to keep up their lights. I have directed all the keepers whose establishments have been injured to procure materials and make such repairs as shall be necessary to preserve the property until spring, when more thorough repairs will be indispensable, and hope my directions will meet your approbation.

I am informed by the officers of the cutter Morris, just returned from Mount Desert Rock, that they there measured one stone, that was thrown out of its place by the sea, and found it 18 feet long, 14 feet wide, and 6 feet thick—about 57 tons weight.

No. 3.

TREASURY DEPARTMENT, *January* 24, 1840.

SIR: I herewith transmit a copy of a report made by me to the President, relative to the light-house on Robbins's reef, and a beacon on Romer shoal with which the President concurs.

I am, very respectfully, your obedient servant,

LEVI WOODBURY,
Secretary of the Treasury.

STEPHEN PLEASONTON, Esq., *Fifth Auditor.*

TREASURY DEPARTMENT, *January* 22, 1840.

The Secretary of the Treasury has the honor to report to the President of the United States the following statement of facts in relation to the subject referred to him on the 20th instant, concerning the building of a light-house and beacon, by the Fifth Auditor. In the spring of 1837, it became necessary, under an act of Congress, to have the examination and views of certain officers of the navy in respect to the expediency of erecting a light-house on Robbins's reef, and a beacon on Romer shoal, in the State of New York.

Captains Kearney, Sloat, and Perry, were detailed for that duty; and on the 2d day of May, in that year, made a report in favor of the former, and on the 2d June made a report in favor of the latter. Copies of these reports are among the papers referred to me. It appears that the Fifth Auditor afterwards proceeded, through the collector of New York, to make contracts for the erection of the light-house and beacon aforesaid; and in the summer of 1839, when they were both far advanced towards completion, Capt. Kearney addressed a letter to Com. Morris, one of the Navy Board, expressing doubts whether the location of the beacon was judicious and useful, and whether the light-house was the kind of work which had been previously recommended by him and his associates. A copy of this letter, dated August 17, 1839, is also among the papers. Two days after, he addressed a second letter, on the same subject, to Com. Morris, a copy of which is annexed, in which he expresses an opinion against the location of both the light-house and beacon, as well as the buoys generally in that harbor, and up the Raritan bay. In the first letter he suggests, likewise, the propriety of suspending the work on the shoal. These letters were laid before the acting Secretary of the Navy by Com. Morris, and one or both of them communicated, by the former, to the Treasury Department, inviting its attention to the subject. Accordingly, on the 24th day of August, 1839, the Secretary of the Treasury requested the Fifth Auditor to examine into it and make a report. On the same day he made the report, a copy of which is among the papers, and in which he undertakes to justify the location of the beacon and the materials and workmanship of the light-house. He appears also to have called on the collector at New York, who had acted under him on these subjects, to a certain extent, to make inquiries and present a report in relation to the matters complained of. That report was submitted, by the Auditor, to the Treasury Department, on the 25th of September, 1839, with a request to lay the same, and his own previous report, before the President. This was done by the Secretary of the Treasury, and they were likewise laid by him before the Secretary of the Navy. Copies of that request, and of the collector's report, are among the papers annexed.

On the 10th day of January, 1840, the Fifth Auditor addressed a letter to the Secretary of the Treasury, which is among the papers, requesting to be informed what the opinion of the President was in relation to the subject. He was informed that none had been communicated to the Secretary. On the 20th instant he addressed another letter to the Secretary, which is enclosed, expressing an earnest conviction, "it is of importance now for the President to decide whether Mr. Hoyt and myself (Mr. Pleasonton) stand exculpated, or whether Capt. Kearney is justified in the representations he made." In pursuance of this reference, a report of the leading facts and dates, with a specification of the papers, in which all the details

and all the certificates and arguments can be found, has been prepared, and is now presented.

It is not necessary to repeat those details, certificates, and arguments, in the report itself. But in the perusal and consideration of them, before expressing the opinion thereon which is desired, the Secretary of the Treasury has endeavored to overlook any personal allusions and acrimony they may contain, not bearing directly on the question in controversy, and to state his conclusions upon the merits alone.

His conclusions are, that the Fifth Auditor, as well as the collector, stands exculpated from all the charges; and that although there is some evidence against the location of the beacon being the best, for all purposes, which could be selected, yet that due care was exercised in selecting the most suitable site for a beacon on the shoal, which, in its cost, should come within the appropriation, and at the same time be useful to certain portions of the navigation.

The President concurs.—M. V. B.

No. 4.

Cost of and expenses in relation to the French lenses put up in the light-houses at Neversink.

November 23, 1839. Account rendered by Henry Lepaute, of Paris, for 2 lenticular apparatus and 1 lantern, furnished under agreement, of August 22, 1838, with Captain Perry, (of the U. S. navy,) deduction being made for the lens and mirrors not sent, per Mr. Lepaute's letter of August 23, 1839, and including loss in exchange on his several bills, and interest, 64,803.55 francs, at 5⅓ to the dollar, equal to -	$12,150 66
December 31, 1840. Jesse Hoyt, superintendent, charged in his quarterly accounts—	
For cost of a lantern, made in New York for the above lights	3,930 00
For cost of plate glass for the same - - - -	960 00
March 2, 1841. For cost of granite work for alteration of the light-houses - - - - - - -	1,660 00
For laborers and mechanics employed about the same, lead, fuel for melting lead, passages and board of workmen, hire of teams, linen stuff for curtains, cord, and making curtains, brass rollers and balances, barrels, casks, kegs, solder, freight, and cartage - - - - - -	613 00
For rebuilding these light-houses, under the direction of Mr. Bernard, the French engineer, viz: carpenters, coppersmiths, and laborers' work, board of workmen, hire of ox teams, boards, and charcoal - - - - -	956 00
For services of Louis A. Bernard, the engineer sent from France to superintend the fitting up of these lights - -	300 00
For services of Louis Chapdelaine, assistant to Mr. Bernard -	176 00
March 22, 1841. J. J. Morgan charged in his account, ending March 22—	

For work done under Mr. Bernard's orders, viz: masons, stone-cutters, and laborers' work, passages of workmen, slate, furnishing lime, cement, plaster of Paris, lumber, and transportation	$916 94
For repairs and materials, viz: clamps to hold granite, lead, circular balconies, brackets, iron doors and traps, brass-jointed doors, coal, charcoal, files and chisels for cutting granite and cutting down old work off the towers, braces and fixtures to the temporary tower, iron flooring for towers, iron gallows outside, winding platform stairs, plumbers' work, with passages and board, a portable forge and fixtures, freight, and expenses - - - - -	3,048 28
For services and expenses of Mr. Bernard and his assistant -	1,379 20
March 31 and June 30, 1841. Edward Curtis, superintendent, charged in his accounts—	
For 31 days' services, and for board and passages of Mr. Bernard's assistant - - - - - -	79 50
	26,169 58
These items, being for repairs and alterations made on and about the light-houses and appurtenances, do not properly belong to account of expenses in putting up the French lenses, amounting to - - - - - -	7,194 22
And should therefore be deducted from their amount, leaving the sum of - - - - - -	18,975 36

L.

CUSTOM-HOUSE, NEW YORK, *December* 2, 1840.

SIR: I have your letter of the 28th November, in relation to assistant keepers at the Highlands, and also as to the cost of the new lantern.

I could find but one gentleman in this city who would undertake to make it, and I got from him an estimate, the lowest at which he would undertake it, and I had therefore no alternative but to employ him; and the work is well done, and entirely to the satisfaction of Mr. Bernard.

As only one lantern was to be made, the whole cost of the mouldings, &c., fall upon this one lantern, when, as in France, where such lanterns are frequently made, the cost of those things is distributed perhaps among the price of one hundred lanterns. Our lantern costs the more from the fact that we had so little time to make it, when it became necessary to pay an extra price for labor. Under all these circumstances, I really thought we had done exceedingly well in point of expense. At all events, we did as well as could have been done here. I wrote to Boston, and ascertained what the lantern costs at that place, and I am satisfied that $4,000 is cheaper for ours than $1,900 was for the one at that place.

I will ascertain as soon as I can whether you will want a new house. My impression is that you will not; but of this I will ascertain.

The weather continues favorable for us, and I have scarcely a doubt but we shall finish the whole affair this season.

Very respectfully,

J. HOYT, *Collector.*

STEPHEN PLEASONTON, Esq., *Fifth Auditor.*

Extract of a letter from S. Pleasonton, Fifth Auditor of the Treasury, to Jesse Hoyt, collector at New York, dated 28th November, 1840.

I am greatly surprised at the cost of the lantern you had made for one set of the lenses, being nearly $4,000. The one from France cost $2,600, and I had an idea that we could make them much cheaper. Our improved lanterns for reflectors, with large plate glass, cost only $1,400, viz: $1,000 for the lantern, and $400 for large plate glass.

M.

TREASURY DEPARTMENT,

Fifth Auditor's Office, May 13, 1842.

SIR: I now proceed to notice and explain the various allegations contained in the speech, in relation to the light-house establishment, which was reported in the National Intelligencer on the 28th of April last, of a large number of light-houses having fallen down, or been rebuilt, in consequence of their having been badly built originally, viz:

"Frank's Island light-house, erected in 1820, by Winslow Lewis, at a cost of $85,507 56.

"To prevent its tumbling down, owing to the settlement of the foundation, it was taken down and rebuilt of the old materials, in 1822 or 1823, at a cost of $9,750."

The first light-house built on Frank's Island was built by Winslow Lewis, under a contract entered into with Samuel H. Smith, Esq., the commissioner of the revenue, in 1818, and not 1820, as above stated; and Mr. Lewis will doubtless explain the cause of the foundation giving way, and rendering the light-house useless.

Mr. Lewis proposed afterwards, in a letter he addressed to me in December, 1821, to rebuild the light-house on a foundation to be prepared by himself, and which he would ensure for a certain number of years, for $9,750. This letter was transmitted to the chairman of the Committee on Commerce, Thomas Newton, Esq., in one from myself, in March, 1822, and the proposition of Mr. Lewis adopted, and the precise sum he asked was appropriated by both Houses of Congress. A contract was accordingly entered into with him, and a new light-house, of the first class, erected at Frank's Island, which has been in use ever since, now 20 years, and will probably endure for ages. A copy of my letter to Mr. Newton, (marked A,) is subjoined. The letter of Mr. Lewis will doubtless be found on file in the committee room of Commerce.

"Brandywine shoal, erected in 1827 or 1828, by Winslow Lewis, at a cost of $30,000, soon after tumbled down, owing to defective foundation—a total loss."

This light-house was not built by Winslow Lewis, but by William Strickland, Esq., of Philadelphia, whose plan and estimate had been laid before Congress, approved, and an appropriation made of $29,200. Mr. Strickland was consequently employed to do the work, which was very soon afterwards demolished by the action of the sea.

"Natchez light, erected in 1827, but, being placed on and near the edge

of a bluff, was, by a landslide, precipitated to the bottom, and destroyed;" cost, $3,426.

This light-house did not fall in consequence of being placed near the edge of a bluff, but was partly destroyed by the tornado, which demolished a large part of the town of Natchez a few years ago, and the residue was taken down at the solicitation of the town. It never was of much use, and it is not intended to put another in its place.

"Bois Blanc Island, Lake Michigan, erected in 1829, at a cost of $4,695; paid for securing foundation, in 1830, $522 91; soon after undermined and destroyed by the sea, and rebuilt in 1838, at a cost of $4,551."

This light-house, when located, was considered perfectly secure; but the extraordinary rise of the waters of the lake, in 1836 and 1837, brought the water to its base; and in 1837, for the first time, Mr. Wendell, the superintendent, informed me it was in danger. He was immediately directed to protect it either by a wall or a wharf in front; but, before any thing could be done in this respect, a storm arose, in December, 1837, and, forcing the water upon the base of the light-house, it was undermined and fell. There was nothing therefore expended for protecting it, as erroneously stated above. The case was laid before Congress, and an appropriation made, for rebuilding the light-house, of $5,000, on the 7th July, 1838; and it was accordingly rebuilt. A letter from this office, dated February 20, 1838, to the Committee on Commerce, of which a copy is annexed, (marked B,) fully explains the subject.

"Sandusky light-house, erected in 1821, at a cost of $4,250; expenses on foundation in 1822, $2,520; rebuilt, owing to its dilapidation and decay, 1838, at a cost of $3,000."

No part of this statement is true. The light-house was erected at a cost of $7,232; the $2,520 mentioned above being a part of that sum. Nothing was ever paid for securing the foundation, nor was it ever rebuilt at all. The light-house now stands in good condition as it was built, 21 years ago.

"Stuyvesant light, Hudson river, erected in 1830, on a pier, at the edge of a meadow, for $4,000."

This light-house, with the pier on which it was built, was swept off by the floating ice in March, 1832, with several of the keeper's family, who were lost. This was not the only damage done in that neighborhood. Mr. Walter Butler, in a letter to the collector, transmitted to this office, states that "we are suffering much at our village, (Stuyvesant.) The prospect is that there will be a great loss of property." The case was submitted to Congress, and an appropriation made of $5,000 for rebuilding the light-house; and it was accordingly rebuilt.

"Thunder bay, Lake Michigan, (Huron it ought to be,) erected in 1830, at a cost of $4,094; soon afterwards undermined by the sea, and destroyed; since rebuilt—cost unknown."

There is no truth in any part of this statement, except what relates to the cost of the buildings, which was $4,094, as stated. The house was built, not in 1830, but in 1832, and has never been undermined by the sea and destroyed, nor has any expense been incurred for its protection.

"Musquito Inlet light-house, and St. John's River light house."

The cause of the destruction of these two light-houses was fully explained in my report, laid before the Senate by the Secretary of the Treasury, 26th January, 1838, (2d sess. 25th Congress, Senate Doc. No. 138;) it was not, however, because they were badly built.

"Southwest Pass of the river Mississippi, erected in 1831 by Winslow Lewis, on a foundation of old flat-boat plank, at a cost of $10,011 75."

To show that this allegation of using "old flat-boat plank" for the foundation is unfounded, an extract from the contract is annexed, (marked C,) by which it will be seen that the tower was to rest on piles to be driven 40 feet, or as far as they could be driven with a weight of 1,400 pounds, falling 26 feet. This was a light-house of the first class, and built in the best manner, of brick; and, to show that its destruction was not the fault of this office or the contractor, it is sufficient to mention that the place on which it stood is now passed over by vessels, as I am assured, carrying 18 feet water.

"The light-house at the South Pass" was equally well built, and of the same class, but was incapable of resisting the change of the current, produced and forced upon its base by violent storms, and during the past year it was prostrated also. For this light-house, I have substituted a frame tower, at a moderate expense, which, in case the water shall approach it, can be taken apart and removed to a place of safety at a small expense. On all these waters, where light-houses shall become necessary hereafter, I would cause framed towers to be erected, and so constructed that they can be removed, from time to time, as occasion may require.

"Mahon's Ditch, erected in 1831, at a cost of $9,950; rebuilt by Winslow Lewis in 1839; cost unknown."

The cost of this light-house was not $9,950, but $4,975. It was necessarily placed in a wet salt marsh, frequently overflowed, and at length the foundation was so much injured, by the water acting on it, that it was found necessary to remove it to a place of safety; and this was done by Mr. W. Lewis, for $2,500. The original building and the removal of it, it will be perceived, cost $7,475, whilst the original appropriation for erecting the building was $10,000.

"Roanoke Marshes, erected in 1831 by Winslow Lewis, and abandoned in 1839, as uninhabitable. An appropriation is now asked to rebuild it."

This light-house was not built by Winslow Lewis, but by Lucius Lyon, of Michigan, and was represented to be very well built. It was abandoned for three reasons. The first was, that the place never was fit for the location of a light-house, being a low marsh, overflowed at every high tide; and the second was, that the light-house required considerable repairs; and the third, that a man of the name of Van Pelt brought an ejectment against the keeper, and obtained a judgment in his favor, before the Treasury Department was made acquainted with the claim. Mr. McDonald, the then collector, who had procured a grant from the State, in the belief that the title was in it, never having informed the Treasury of the claim of Van Pelt, who, after his title was confirmed, asked more than the Treasury was disposed to give him. These reasons, combined, induced the Department to abandon the establishment about two years ago. No appropriation has been asked by the Department, with which to put up new buildings.

"Thomas's Point, Annapolis, erected in 1825, at an expense of $5,676. A sea wall was afterwards erected here, and in 1838 the tower was taken down and rebuilt, at a cost of $2,500."

This light was placed upon a clay bank at least 30 feet high, and about 500 feet from the water. Such was the action of the water upon the bank, that in a few years it was washed away to within 50 feet of the light; upon being informed of which, I directed a quantity of rubble stone to be placed at the base of the bank. This arrested the water but in a slight degree,

and in 1838 it had approached within 15 feet of the light-house, when I contracted with Winslow Lewis to take down the tower, and rebuild it in a secure place, for $2,000. This case shows, as clearly as any thing can do, the danger which attends all such establishments.

"Cumberland Island, erected in 1820, by W. Lewis, at a cost of $17,000; rebuilt by him in 1838, at a cost of $7,000."

This house never was rebuilt, but it was directed to be removed to Amelia Island by the act of the 7th of July, 1838, and was accordingly removed, and is now in use on Amelia Island.

"St. Mark's, Florida, erected in 1831, (1829,) by Winslow Lewis, at a cost of $11,765."

This was a light-house of the first class, and well built. The sea, however, approached its base in such a manner as to endanger the building, rendering it necessary either to put up a breakwater around it, at a heavy expense, or remove it to a secure position. I preferred the latter, and caused the work to be done during the last winter. According to a letter from the superintendent, a copy of which is subjoined, (marked D,) the work has been faithfully done.

"Ocracoke light-house, erected by Winslow Lewis in 1823, at a cost of $11,309 25; rebuilt in 1829, at a cost of $11,154."

This is a gross error. The first light-house built at Ocracoke was on Shell Castle Island, in the year 1798, and was built in connexion with the one on Cape Hatteras, by H. Dearborn, Esq. In process of time, the channel leading in and out of Ocracoke left the light-house the distance of a mile, so as to render it altogether useless. The fact being made known to Congress, an appropriation was made of $20,000, for building another near the channel, and this was built in 1823, not by Winslow Lewis, but by Noah Porter, of Massachusetts, for $11,359 35. This house never was rebuilt, as stated, but is now in good preservation.

"Fairweather Island, erected in 1808; rebuilt in 1823, at a cost of $2,300."

The first light-house here was built long before I had any thing to do with the establishment. It was blown down in a strong gale, on the 3d September, 1821, and rebuilt by me, of stone, for the inconsiderable sum of $2,300, in 1823. So important was it, however, to preserve the light at this place, and so dangerous was its situation at all times, that the people interested in it procured from Congress appropriations, from time to time, to place and maintain a sea wall around the most exposed part of the island.

"Turtle Island, Maumee bay, erected in 1831, at a cost of $3,850; cost of repairs on foundation and sea wall, $3,068 47. Rebuilt in 1837, at a cost of $6,800; cost of repairs in three years, for sea walls, &c., $7,900."

This statement is founded altogether in error. This light-house never was rebuilt. The extraordinary rising of the lake reduced the island from eight acres to about one acre and a half, and threatened to destroy it entirely, and the light-house with it, in 1835 and 1836. At my request, Isaac S. Smith, Esq., who built the pier and light-house at Buffalo, presented me with a plan for securing the island and light-house, which proved effectual. It was to contract the island to one half acre, drive a double row of piles around it, filling in between the rows of piles with rubble stone, elevating the island with the surplus part, which was mostly sand; and upon this earth was to be brought and placed, from the main land.

This was all done, under appropriations by Congress, and cost $16,700. On this point, extracts of two letters (marked E) are herewith enclosed.

"Stonington light, &c.," was noticed in a letter already before the committee.

I have the honor to be, very respectfully, your obedient servant,

S. PLEASONTON.

Hon. JOHN P. KENNEDY,
Chairman of the Committee on Commerce, H. R.

(A.)

TREASURY DEPARTMENT,
Fifth Auditor's Office, March 12, 1842.

SIR: I have the honor to enclose a letter from Mr. Winslow Lewis, of the 4th of December last, containing a proposition in relation to the light-house on Frank's Island, at the mouth of the Mississippi river. If the committee should consider it proper to adopt the proposition of Mr. Lewis, of which I entertain a favorable opinion, it would be necessary that the sum mentioned in his letter should be specifically appropriated; in which event, the floating light now in use near Frank's Island could be transferred advantageously to the neighborhood of Pensacola.

I am, &c.

S. PLEASONTON, *Fifth Auditor, &c.*

Hon. THOMAS NEWTON,
Chairman of the Committee on Commerce.

(B.)

Extract of a letter from S. Pleasonton, Fifth Auditor, to the chairman of the Committee on Commerce, dated February 20, 1838.

I have the honor to enclose a letter from Abraham Wendell, Esq., the superintendent of light-houses at Mackinac, with a letter enclosed from the keeper of Bois Blanc light-house, by which it appears that that light-house was undermined by the water of the lake, in a violent storm, and fell to the ground on the 9th of December last.

It seems that the water of the lake, from some unaccountable cause, has risen considerably since the light-house was built, and has been gradually washing away the land on which it stood, until the late storm, in December, brought the light-house to the ground. I was not apprized of the danger by the superintendent until it was too late to provide a remedy. I have written to the superintendent, to inform me whether there is any safe situation on the island of Bois Blanc, on which another light-house can be built, with advantage to navigation. As the island is large, I have no doubt another light-house can be advantageously built, in a situation free from danger of the lake; and I would therefore respectfully recommend that a sum of seven thousand dollars be appropriated for rebuilding this light-house.

(C.)

Extract from a contract between David Henshaw, the collector at Boston, and Winslow Lewis, dated December 2, 1831, on record in the office of the Fifth Auditor, for building a light-house, &c., at the South Pass, (Gordon's Island,) and at the Southwest Pass of the Mississippi river.

For the foundation, piles are to be driven down to the length of forty feet, or as far as they can be driven by a ram of 1,400 pounds, falling twenty-six feet, forming a circle of twenty-five feet diameter. The piles to be twelve inches over at the top, and to be driven three feet apart, from centre to centre. Another circle of piles of the same length and size to be driven in the same manner, two and a half feet within the first circle, to be two and a half feet from their centres. A third circle of piles of the same size to be driven the same length, two feet four inches within the second circle, to be two feet apart from their centres. The top of the piles to be cut off one foot above the surface of the ground or the level of the sea at high water, should the sites be liable to be overflowed with the tide. Timbers twelve inches square to be tenoned on the head of the piles, from the outer to the inner circle, on which is to be placed plank four inches thick, on which the walls of the tower are to commence. Four feet without the outer circle of piles, for the foundation, are to be driven a circle of piles nine inches over and five feet apart; the heads to be cut off even with the commencement of the brick work. The inside of the outer circle to be planked with three-inch plank; the space between that and the foundation to be filled in with earth.

(D.)

Extract of a letter from William H. Ward, superintendent of the light-house at St. Mark's, to the Fifth Auditor, dated St. Mark's, April 30, 1842.

I have the honor of informing you that the light-house at this place was completed on the 21st instant. I cannot give Mr. Knowlton too much credit for the faithful manner in which he has completed this work; and deem it due to him to confess that I have not found fault of him in a single instance.

(E.)

Extract of a letter from the Fifth Auditor to the Hon. Joel B. Sutherland, chairman of the Committee on Commerce, dated December 13, 1836.

The failure of the light-house bill in the Senate, at the last session, renders it necessary for me again to bring to the attention of the committee certain objects connected with the light-house establishment, for which provision ought to be made by law.

1st. Turtle Island light-house, at the entrance of Maumee bay, Lake Erie. The island on which the light-house stands has for some years past

been gradually washing away, so that it has been reduced from eight acres to less than one acre and a half in extent. So great was the danger, during the storms of the past autumn, that it would entirely disappear, and the light-house with it, that it was deemed necessary to authorize the sum of five* thousand dollars of the appropriation for light-house contingencies to be expended in procuring stone and erecting a wall to some extent, for its temporary security. This may possibly preserve it during the ensuing winter; but so important is this light-house considered to the already large but increasing trade of the Maumee river and bay, that I cannot too strongly urge upon the attention of the committee the necessity of making due provision for its permanent security. The sum of eight thousand dollars, heretofore recommended, is respectfully again recommended as a proper sum to be appropriated for this purpose.

Extract of a letter from the Fifth Auditor to the Hon. Joel B. Sutherland, chairman of the Committee on Commerce of the House Representatives, dated February 29, 1836.

The light-house at Turtle Island, at the entrance of Maumee bay, in Lake Erie, is represented to be a very important one. The island on which it stands is in danger of being washed away; and in order to secure it, and consequently the light-house, an appropriation of eight thousand dollars was recommended, in my letter to the committee of the 24th December last, as indispensable. In the bill, I observe, this appropriation is omitted. Permit me to again call the attention of the committee to the necessity of this appropriation. Without it, before the return of another winter, this light-house will probably be lost.

N.

BOSTON, *April* 8, 1842.

SIR: I received, a short time since, from the Fifth Auditor, a copy of a letter from J. W. P. Lewis to the Hon. Robert C. Winthrop, on the condition of the light-houses and the management of the establishment, with the project of a bill, which he requests Mr. Winthrop to aid in its passage through Congress.

Mr. Lewis makes sweeping assertions as to the state of the light-houses, their location, and the conducting of the establishment, since we were a Federal Government, and the assertion, in language that could not be misunderstood, that every person, since 1789, who ever had any thing to do with light-houses or their location, from the head of the Treasury Department down to the smallest contractor, were ignorant and incompetent men, and have practised frauds.

I will give a short extract from Mr. Lewis's letter to Mr. Winthrop: "In this way we can go on through the Union, and prove that enormous sums are wasted by patching the *frauds* of former days, *or in the commission of new ones.* We have 236 witnesses, in the shape of light-houses, that all order, economy, and utility, in the construction, illumination, and

* Only $2,000 were expended. Congress afterwards appropriated $14,700 for securing this island.

administration of the light-house service is set at utter defiance by the rule of *ignorant and incompetent men*, who are still pursuing the same career."

These assertions, coming from a person of Mr. Lewis's limited knowledge of the subject, without one document to substantiate the charges, I was fearful would not be noticed; but, by a letter from you to the collector of this district, I am led to believe the subject is now before a committee of the House of Representatives, which I am pleased to learn, as the subject will be investigated.

A thorough investigation is only wanted, to prove that the light-house establishment has been conducted with the most rigid economy—more so, I believe, than any other branch of expenditure by the Government; that the light-houses are all judiciously located, and have been erected in the best manner the limited appropriations made by Congress would admit; that the lights on our coast are good; that no complaint has been made for many years of any deficiency of light; that there are not too many light-houses east of New York, the coast being indented with harbors; that the inlets from the ocean, from New York to the river St. Mary's are far between, and that there is a light-house at every inlet where there is any depth of water; that 13 light-houses have been erected in Florida since it was ceded to the United States, and that the Indian war has prevented any additional light-house being built on the Atlantic side of Florida for the last six years.

All this, I conscientiously believe, will be proved to the satisfaction of the committee, if investigated. As my name must often come before you in your inquiries, having spent the last thirty-two years of my life in rearing and improving the lights on our coast, I will take the liberty of giving a concise detail since 1808.

In the early part of my life I commanded a ship. In the long embargo of 1807 and 1808, I turned my attention to invent something that would improve the lights on our coast. After trying experiments for a length of time, in 1811 Government authorized me to light up Boston light-house with my invention. The result was, that the new light could be distinctly seen at the distance of 30 miles, when the old light never could be seen more than 15 miles. The old light consumed, annually, 1,600 gallons of oil, the new light but 420 gallons—reducing the expenditure of oil about 75 per cent., and producing double light.

The report of a committee appointed by Government to examine Boston light is now on the files of Congress, and will substantiate what I have said. In March, 1812, Congress passed an act authorizing the Secretary of the Treasury (Albert Gallatin) to contract with me to light all the light-houses on the coast (49) on the same principle that I had lighted Boston light-house, provided I gave satisfactory bonds, to the amount of $60,000, that I would produce a better light, and save one-half the whole expense of oil. Such bonds were given, and a contract entered into 26th March, 1812, the whole to be completed in two years. In 1813 my vessel was captured and destroyed by the enemy, and the whole of the light-houses were not completed until the fall of 1815, when the contract was fulfilled to the entire satisfaction of the Government, as will appear by a letter of Samuel H. Smith, commissioner of the revenue, published by him in the National Intelligencer, November, 1815. January 1, 1816, I entered into a contract with Mr. Smith to keep all the light-houses supplied with a sufficient quantity of good sperm oil for seven years; to visit every light-house in

person, annually, and report their condition to the Department, the Government allowing me, annually, one-half the quantity of oil consumed in the former mode of lighting the light-houses. At the expiration of seven years, I renewed my contract for five years, by which I was allowed, annually, only one-third of the oil annually consumed by the old method of lighting the light-houses. These contracts were executed to the entire satisfaction of the Government and the public. Since 1828 I have been most of the time engaged in building light-houses, stone beacons in exposed situations, and breakwaters for the security of sites of the light-houses.

There can be no complaint that those who were at the head of the light-house establishment have not given an opportunity for a fair competition in the building of light-houses. With the exception of two, every new light-house authorized by Congress, since 1816, has been advertised for proposals—not only the light-house, but the lighting apparatus—and the lowest offer always accepted, if good bonds could be given.

My long experience in the business, and the men in my employ grown gray in the service of building light-houses, enables me to offer lower than others now in the business, and about 80 of the existing light-houses have been built by me. During the last year I have been employed in improving the lights on the Isle of Shoals, Cape Ann, Scituate, Cape Henlopen, Cape Henry, Tybee, Old and New Point Comfort. These were old light-houses. The power of light now exhibited in those light-houses is not surpassed by those of any country, and they can all be seen at as great a distance as ever can be of any use to the mariner.

From my commencement in the business to the present time, I have retained the confidence of Government, whether deserved or not I will not say. What I have done for thirty years in light-houses, stone beacons, and breakwaters, is before the public; by their opinion I stand or fall.

The form of the reflectors that Mr. J. W. P. Lewis has put into four light-houses is the same, without any deviation, as those I put into Boston light-house 31 years ago. A sample of my reflectors may be seen at the Fifth Auditor's office.

Presuming you have Mr. J. W. P. Lewis's communication to Mr. Winthrop before the committee, in which, alluding to me, he used the words "utter ignorance of hydraulic architecture," in answer, I refer you to the plan of the light-house on Robbins's Reef, near New York, the stone monuments on the Romer shoal, New York bay, and Deer Island point, Boston harbor, built by me. In this branch Mr. J. W. P. Lewis has had no experience, although he alludes to himself as an architect. There never was but one building, of any kind, erected, which he planned, and that is the light and dwelling-houses at Stonington; and this can never be made tenantable without a large expense. The fault is not in the contractor, but in the plan. There it stands, and will speak for itself.

It appears to be the object of Mr. Lewis, who signs himself a civil engineer, and the gentleman associated with him, who, I am told, has a brother in the Engineer department, to have the management of the light-houses transferred from the Treasury Department, where they have been so long conducted to the satisfaction of the public, to the Engineer department, to give employ to themselves.

At my advanced age, it can make but little difference to me which department has the management of the light-houses. Having spent almost a long life in the establishment, I cannot but feel a deep interest in it.

The subject is now before a judicious committee who will investigate it. The result, I think, I can anticipate. From 1820 to 1837, light-houses were petitioned for from every quarter of our extended seacoast and lakes. They had to be built to come within the appropriations, which, in most instances, were very limited, but they answered the purpose intended, and the petitioners and the public were satisfied.

When a light-house was to be built on the southern coast of Florida, in every instance the contractor has been some one residing in Massachusetts. The Fifth Auditor instructs the collector of Boston to make and execute the contract, agreeably to the specification advertised and terms of the offer. This contract is sent to the Fifth Auditor, who transmits it to the collector of the district where the light-house is to be built, and the work is done under his superintendence; he receives his commission. The collector at Boston receives no fee, neither has any thing to do with the light-house, except to pay the money when the contractor produces a certificate from the superintendent that the work has been done to his satisfaction, and agreeably to the contract.

The system now pursued by the Department, for furnishing the light-houses with oil, &c., and keeping all the reflectors in repair, is this: They advertise for proposals to furnish so much oil; being cash, it is obtained at the very lowest rates. They also receive proposals for all reflectors, lamps, parts of lamps, and lamp glasses, that are wanted for repairs. One vessel keeps all the light-houses, except those at the lakes, supplied with oil and other necessary articles. The repairs to the lamps and reflectors are made by a coppersmith on board. The whole expense of this vessel is $756 per month. The oil is closely inspected, to ensure the best.

In the draught of the bill annexed to Mr. J. W. P. Lewis's communication to Mr. Winthrop, to transfer the light-houses from the Treasury to the Engineer department, one section provides that the United States should be divided into four districts; each district to be under the superintendence of an engineer, who is to be allowed a vessel, to be fitted, manned, and employed, for the convenience of the engineer and to transport the supplies.

Here are to be four vessels employed, officered, and manned, to do the duty which is now well done by experienced men, by one vessel, at the expense of only $750 per month. The expense of those four vessels, fitted out, officered, and manned, under the direction of an officer of the engineers, and keeping them in repair, will be more than $30,000 annually.

I have yet to learn why an engineer is in any way required about the light-houses. No one has ever been employed about them, in this country or in England.

Within two years, Mr. J. W. P. Lewis has been employed to put lamps and reflectors into four light-houses, in which there are 45 lamps; by the keepers' returns, each of those lamps consumes, annually, 60 gallons of oil. Within the same time, I put 45 lamps into three large light-houses, (made in the same manner I always have made them,) which, at least, produce as much light as those of Mr. J. W. P. Lewis, and consume, annually, but 30 gallons of oil, each lamp—making a difference of the expense, in 45 lamps, of 1,350 gallons of oil, or $1,350 annually.

Mr. J. W. P. Lewis signs himself as engineer. Should the light-houses be transferred to that department, it would follow that his plans would be adopted. There are about 3,000 lamps in the United States light-houses. Allowing each lamp to consume 30 gallons of oil more than those now in

use, they would require 90,000 gallons of oil more than those now in use—an annual extra expense of $90,000, without producing any more light.

Every branch of the management of the light-houses is now under the care of those who are in the habit of closely calculating dollars and cents. Not so with the officers of the army, navy, or engineers.

You have a most faithful officer in the person of the Fifth Auditor, who has made every exertion, for more than twenty years, for the improvement of our light-houses, and the management of them with the greatest economy. At no period has the system of the management of the light-houses been more perfect than at the present time, or their annual supplies furnished with so little expense. To change the management of them to another department, the whole system will commence anew, and by inexperienced men in the business. I cannot suppose so important a change will be made without some radical defect is discovered in the present system, which I am confident does not exist.

The correspondent of the "New York Herald," in Washington, under date 4th instant, says that "it is understood that, at the present time, there are thirty light-houses which are utterly useless for all purposes of commerce, being dilapidated and tumbling down." Sir, I pledge my reputation, and do assert, that there is not at this time, and never was, any reduction of light in any light-house in the United States, on account of any defect in the building.

You will excuse the length of this letter. Having the honor of being known to you, you will give it just as much weight as you think it may deserve.

I am, with great respect, your obedient servant,

WINSLOW LEWIS.

Hon. CHARLES HUDSON,
M. C., Washington.

O.

BOSTON, *May* 16, 1842.

SIR: I have received your letter of the 28th of April, with the paper containing Mr. Proffit's speech on the light-house system.

I shall now take up Mr. Proffit's speech, and reply to it in the course it was delivered, stating where he has wholly deviated from fact, explain where he has made charges that require explanation to place them in the right view, and point out where he has shown himself mistaken on the subject on which he spoke. I trust you will consider my statement as coming from a source entitled to your confidence. I shall be always ready to substantiate proof when called on for it.

Mr. P.'s first attack on the light-houses commences by saying, "I regret to say I have found it obnoxious to many charges of waste, inefficiency, and mismanagement, and at present is in any thing but a creditable position."

Here I will challenge Mr. P. to name a single instance where the charge was ever made, by any one, of waste, inefficiency, or mismanagement, except by J. W. P. Lewis and the Blunts. So far from their not being in a creditable condition, there never was a period when the whole light-house establishment was in so good order and the lights so good as at this time. For seven years past I have never heard of a single complaint being made,

either to the Department or any superintendent. Every navigator I see or hear from speaks of the goodness of our lights, taken as a whole; and they are improving as fast as the Department can get appropriations to do it. Owing to the rapid increase of our light-houses, the appropriations made by Congress were very limited; in a great many instances, $4,000, or not exceeding $5,000, to buy the land, build a brick light-house and dwelling-house, and furnish the lighting apparatus. The act of Congress instructed the Treasury Department to build a light-house at such a place, and the plan had to be made to come within the appropriation. Those light-houses were built; they being mostly bay or harbor lights, they answered the purpose, and navigators have been satisfied. Those light-houses are now standing, and in good order. The appropriations have been more liberal for those I have built or given the plan of for the last several years, and the light-houses built on a larger scale, and with the most lasting materials, dispensing with every inch of wood, and making use of no materials but brick, stone, and iron. In the fall of 1839, the Department commenced improving our most important light-houses by putting on larger lanterns, glazing them with best large plate glass, in lieu of the common crown glass, and putting in the large 21-inch reflector, in lieu of smaller, commencing with Boston light-house. Since that, I have put new lanterns, glazed with large plate glass, lighted with large reflectors, the Isle of Shoals, Thatcher's Island, Cape Ann, Scituate, Chatham, Cape Henlopen, Cape Henry, Old and New Point Comfort, and Tybee light-houses. The workmanship of those lanterns and lighting apparatus, and the brilliancy of the lights, are not exceeded by any in this or any other country; yet Mr. P. does not mention one of those, but only names Boston and Truro lights, (put up by J. W. P. Lewis;) and those two were done precisely on the same principle that I lighted Boston light-house thirty-one years ago, but with larger reflectors and plate glass.

Mr. P. says "that the light-houses, as originally constructed, are entirely unfit to withstand the elements, and erected upon plans so entirely at variance with all scientific skill, that it requires a vast amount annually to keep them in habitable order."

All the light-houses are round towers of brick or stone. It requires much more practical knowledge than science to build a light-house. I would ask Mr. P. to name in what instances the light-houses have been built upon plans so entirely at variance with all scientific skill. Mr. P. says "this is not the first instance that this subject has been brought before Congress."

It is not. It was brought before Congress in 1838? But by whom? Not by the public; for they found no cause for complaint. It was by those very Messrs. Blunts who are now engaged with J. W. P. Lewis in attacking the system. Those Messrs. Blunts were then acting as pioneers to some gentlemen of the navy, behind the curtain, to get the light-houses changed from the Treasury to the Navy Department. The subject was closely investigated, particularly by our late Senator, now Governor Davis, who took a deep interest in it. The conclusion was, that it would be more for the interest of the public for them to remain where they had always been.

Mr. P. says "that half of our light-houses were found to be in a state of dilapidation and decay, or kept in such condition as to be of little or no service to navigation."

Now, I assert, and on which I would risk my reputation, that there never was an instance where there was any deficiency of light in any light-house, caused by any defect in the building.

Mr. P. quotes a letter from a light-keeper, saying "that the light-houses were in the worst places they could be placed; they being but 15 feet high, the sand blows up the banks, and injures the glass."

All the banks of Cape Cod, next the ocean, are sand. Where could you place a light-house, that the lantern would not be exposed to the blowing of the sand.

I next notice Mr. P.'s remarks on the light-house at Stonington. Here was employed a person who assumes the character of both engineer and architect. The Fifth Auditor was informed by the superintendent that a severe gale of wind had washed the sand out from the rocks, so that in a storm the spray of the sea would fly on to the house. I was then absent at the South. The Fifth Auditor employed J. W. P. Lewis to go and examine it, which he did. He reported, as I was informed, that a wall would cost $9,000; and recommended that a piece of land some way back from the shore should be purchased, and a new light-house and dwelling-house be built. This report being agreed to by the superintendent and collector at New London, the Fifth Auditor agreed to it.

Being conversant with the place, knowing the shore was protected by rocks, and sufficient stone near, I venture to assert that a stone sea wall might be built for $2,500 that would protect the building for fifty years to come.

The land was purchased, a new light-house and dwelling-house were built, planned by this "engineer and architect," J. W. P. Lewis. Dwelling-house thirty feet square, one story high, roof entirely flat, (after the manner of building at the East,) covered with copper. When the snow lies on it, or it rains hard, it leaks, so as to render it untenantable, and the expense of a new roof, adapted to the climate, must be incurred. This light-house and dwelling-house are the worst-planned buildings for the purpose that ever were put up in the United States, and are the only buildings of any kind ever built, which Mr. J. W. P. Lewis made the plan of; yet he assumes the character of an experienced architect as well as an engineer. I was at this light-house some length of time after it was built. The old light-house and dwelling-house were then standing in perfect order; not a pane of glass had been broken by the sea. I have dwelt on this part of the subject, to show you what would be the effect of Mr. Proffit's plan of employing engineers and architects.

Mr. Proffit says "that $25,000 was appropriated to erect a beacon on the Romer shoal, New York bay. The Fifth Auditor called on Winslow Lewis to furnish a plan and estimate, and finally agreed with him to build it for $24,580. That the contractor placed the beacon two miles from the intended site, on a spot where he could work without being exposed to the rough sea, and that the cost of all the materials was but $8,000."

In 1837, $15,000 was appropriated for building this monument. By the request of the Fifth Auditor, I surveyed the shoal, and found that $25,000 would be required to build it in eleven feet water, with such materials and in such manner as would ensure its resisting the force of the sea and the ice; and that at least four or five thousand tons of stone must be laid around it, to prevent the strong current taking the sand from around it. In 1838 an additional appropriation of $10,000 was made. I matured the

plan and built it where it ought to stand, near the channel, in eleven feet water. Had I built it in five feet water, it would have cost me less money, but it would have been useless, as no vessel could have come nearer than one mile of it. As it is now placed, there is eighteen feet water within four hundred feet of it. That it was well built no one will deny. It has stood the force of the storms and ice, and will for fifty years to come. The material was hammered Quincy granite, bolted together with one and a half inch copper bolts. Cost, with freight from Boston, about $12,000. Labor, three vessels employed four months, diving bell, and floating coffer dam, cost $10,000. The three thousand five hundred tons stone placed around the beacon Government paid no more for than I paid for having it placed there.

In 1837, $200,000 was appropriated to build a light-house on Flynn's Knoll, two miles from this beacon—about the same depth of water, and similar bottom. This work was planned by a United States engineer; commenced in the spring of 1839, under his superintendence, and from $40,000 to $60,000 was expended. In the October following not a vestige of the work remained, and the whole plan was abandoned.

Mr. P. says "that twenty-four reflectors of the most perfect description are required to illuminate the entire circle of the horizon; that at Monamoy, we have a light with but eight lamps and reflectors; this light has a range of nearly the whole circle, and should, by the rule above stated, have at least twenty lamps."

Here is an instance of Mr. Proffit's misinformation of the subject on which he was speaking.

The diameter of the circle on which the lamps and reflectors are placed ranges from three to six feet, according to the size of the lantern; the diameters of the reflectors are from thirteen to twenty-one inches; so that six 18-inch reflectors would illuminate every point of the compass placed on a circle of three feet diameter, when it would require twelve of the same size to illuminate thirty-two points of the compass, if placed in a circle of six feet diameter. Monamoy is a small light-house, to guide vessels into the Vineyard sound through Butler's Hole channel, which is norrow and intricate, only used by vessels drawing ten feet water and under. This light is lighted with eight lamps, with 14-inch reflectors, illuminating twenty-eight points of the compass—all that is required. It has been built nineteen years, and there never has been a complaint that there was not sufficient light, or that as many points of the compass were not illuminated as was required.

Mr. Proffit says "that at Truro one reflector had stood for seven years, facing the copper door of the lantern, and the same at Provincetown."

This is an incorrect statement; they were not so placed.

Mr. Proffit's remarks on the light boats and buoys evince such a want of correct information, relating to them, that I shall only notice a few.

Light-boats are stationed on the ocean, or in bays and sounds where light-houses could not be built; and those on our coast are anchored in from three to ten fathoms of water. Mr. Proffit says "that, notwithstanding the cost of these wretched contrivances, no effort has been made to replace them with permanent structures, and there are very few of the stations where an engineer would fail to obtain a foundation."

The gentlemen composing the corps of engineers are mostly men of talent, but in almost every instance where they have come in contact with the

effect of the ocean, they have failed, for the want of practical knowledge. To build permanent structures for light-houses where our light-boats are stationed, even were it practicable, would cost many millions of dollars; in most cases it would not be practicable. The idea is too visionary to dwell on. As to beacons, I have built but two—one on the Romer shoal, New York, and the other in Boston harbor; and gave the plan for the one on Bowditch's ledge, Salem, and the light-house on Robbins's reef, near New York city. When either of those structures are thrown down by the effect of either sea or ice, I am willing to receive any censure that may be bestowed on me.

As to Mr. P.'s remarks on buoys, some twenty years since the spar buoy was substituted for the can or nun buoy. Experience has proved that the spar is by far the best, as less liable to be moved by the ice and sea; cost but $30. The can or nun buoys formerly used cost from $100 to $500. Mr. P. says: "There is one point in which the American light-house system is placed in a very questionable light, and is shown by the fact that, of 191 light-houses standing between Eastport, Maine, and the Sabine river, Louisiana, there are 111 east of Sandy Hook light, and only five light-houses and two light-boats on the peninsula of Florida—a distance of 1,000 miles." The distance is but 700 miles. If Mr. P. had a thorough knowledge of the coast, he would have seen that the whole coast, from Sandy Hook to Eastport, is indented with harbors sufficient for commerce, while south of Sandy Hook the inlets from the ocean are few and far distant. I would ask Mr. P. to point out one inlet, from Sandy Hook to the river St. Mary's, where there is water enough for vessels to enter, or any prominent, cape that has not a light-house. On the Atlantic coast of Florida there are eight light-houses. Ever since the Seminole war commenced, the Indians have prevented the erecting any light-houses on that coast, or the repairing that which was burnt. Eighty thousand dollars has been appropriated to build a light-house within Carysfort reef, in lieu of the life-boat.

I notice Mr. P.'s remarks on the light-houses in Massachusetts, say from Newburyport to Plymouth; he admits the distance is 30 lagues, in which there are what he calls six double lights. He says "the double lights at Newburyport are only nine miles distant from those at Ipswich." Those two are—one a revolving, the other a fixed light.

Those lights on Thatcher's island, Cape Ann, are lights of the first magnitude, of an equal height, and are 1,300 feet apart. Those at Baker's Island are only 30 feet apart, and one is 15 feet higher than the other. Those at Plymouth, 90 miles, (as Mr. P. says,) from Newburyport lights, are 40 feet apart, of equal height. Where he gets the sixth double light I have to learn. There are but five. I call on Mr. P., or any one else, to point out a single instance in which one of those double lights was ever taken one for the other. I will assert there never was an instance. With the exception of Ipswich lights, four have been as they now are for more than forty years. Mr. P. says: "Of the 22 lights in Boston bay, only two are revolving lights."

Every man who has a correct knowledge of the lights in Boston bay will tell you no more revolving lights are required. Every navigator out of Boston will say the lights in the bay are sufficiently designated to prevent one light being taken for the other, and that long experience has proved it.

Mr. P. says: "In clear weather the whole of these 22 lights are visible at one view." This is admitting that the lights are all good, and well illumi-

nated, for some of them are 70 miles apart. Mr. P. says: "Which of the six pair of double lights was the right to steer by can be better explained by some one more familiar with that neighborhood than he was."

Mr. P. remarks: "The light-houses on the back side Cape Cod are on a clean, bold shore; we have a double light at Chatham, 12 miles north of it; we have triple lights at Nauset—this merely for distinction; we have no revolving light in that neighborhood." The double lights at Chatham were built 34 years since. At that time, vessels drawing 14 or 15 feet water could go into that harbor. The two light-houses were for ranging lights to go over the bar. The double lights are now required for two purposes: one to designate them from the light on Monamoy Point, and the other for ranging lights to carry vessels clear of the dangerous shoal called the Pollock Rip, lying off Chatham some miles. Mr. P. says: "Cape Cod is a clean, bold shore." The northern extremity is so, but not the southern. Three lights were erected at Nauset, to ensure the most certain distinction between them and the two lights at Chatham on one side, and the single fixed light at Truro on the other The three light-houses, with a dwelling-house, all well built of brick, cost less than $7,000, including all the lighting apparatus. Mr. P. says "there is no revolving light in that neighborhood." Race Point light, at the end of Cape Cod, only 12 miles from the three lights at Nauset, is a revolving light. Here is a great omission in Mr. P.

Mr. P. says: "Let us have a few platoons of those light-houses among the keys and reefs of the Florida shore, and not depend on the British Government to provide lights for our commerce in our own waters."

The British own all the Bahama islands. You may line the whole coast of Florida with light-houses, and still our commerce bound round the Tortugas must depend on British lights for their outward passage. They must pass the light on Abaco.

Mr. P. says: "Complaints have often been made of the dimness of our lights, and of their being allowed to go out; and the keepers throw the blame on the oil contractors."

I would ask Mr. P. to name one instance in which a complaint has been made, either to the Department or to any superintendent, for at least ten years past, or name one instance where a light was ever allowed to or did go out during the night. There has been no oil contractor for three years past. The oil is furnished by Government, and is tested in that manner that none but the very best is received.

Mr. P. goes on at full length about contractors for supplying the light-houses with oil and other things required, when there is no contractor for this purpose, and has not been for three years.

I come now to that part of Mr. P.'s speech which relates more particularly to myself, which he says "he has prepared from public documents." I will say here, at once, that what he states could not all have been prepared from public documents, and this I shall presently prove. I also say that in no instance have I been called on to fix on the site of a light-house. This has always been done before petitioned for to Congress. Observations made for a great length of time, by navigators, pilots, and the inhabitants living in the vicinity, interested in navigation, have shown the importance a light-house would be, if located on some particular spot. A petition is then got up and sent to Congress, praying that a light-house may be erected in such a place. The prayer of the petition is granted, and it is not

in the power of the Fifth Auditor, or any one else, to alter the location without the action of Congress.

Now, sir, I would ask you which you would rely most on for the placing of light-houses, to be the most useful for the safety of navigation—the judgment of navigators, pilots, fishermen, and the inhabitants residing in the vicinity, (all these being long conversant with the place,) or that of an engineer who knows nothing of the place, (perhaps never saw it,) the rocks or shoals which the light is to enable mariners to avoid, the setting of the tides or depth of water? The answer is obvious.

Next is Mr. P.'s schedule of names and cost of light-houses which have been erected since 1820, all of which, by his account, have tumbled down for want of proper foundations, or have been rebuilt for similar reasons, viz: "Frank's Island light-house, Northeast Pass, Balize, Mississippi, erected (1820) by Winslow Lewis, at a cost of $85,000. It was taken down and rebuilt of the old materials, (1822,) at the cost of $9,750."

This light-house being built on a plan given by a noted architect and engineer, Mr. Latrobe, I shall notice it particularly, to show what would be the effect of employing scientific men (engineers, of course, for it would seem that no others can have any knowledge of science, in Mr. P.'s opinion) instead of those who have practical knowledge.

This plan was made in 1816, and $60,000 was appropriated to its execution; it was advertised, inviting proposals, but no offer was made by any one to build a light-house of the immense weight of 8,000 tons on a site like the land at the mouth of the Mississippi, and a plan so complicated that few could understand it. In 1817, an additional sum of $20,000 was appropriated, making $80,000; but no one offered to contract, even for that sum. In 1818, I was urged by Samuel H. Smith, then commissioner of the revenue, to agree to build it for the appropriation. I told him the plan was an injudicious one for any light-house, particularly for that site; that I had no confidence that the foundation would support such an immense weight; but I would agree to build it on the following conditions: That a competent man should be appointed to inspect the work in progress; every thing should be done agreeably to the plan; if the foundation gave way before I completed it, I was to be paid for every thing as far as I had gone. I went on and completed it, in 1820, so far that, in three days, the whole would have been finished, when the foundation gave way, and the tower settled down six feet. Some of the items in this stupendous fabric were: 1,100,000 brick, 1,000 tons rubble stone, 200 tons hammered stone, and 800 tons timber. The stone piazza around the building cost $8,000 in Boston. So much for engineering and architectural science in building light-houses.

In 1822, I made a proposal to the Department to take the light-house down, which was then standing, and never lighted, and to build another on my own plan, 70 feet high, walls five feet thick, and to give bonds to guaranty its standing, for $10,000. The offer was accepted, and the light was built. There it stands, perfect to this time, and will stand as long as brick and mortar will last.

The next mentioned in Mr. P.'s schedule is the "light-house built on the Brandywine shoal, Delaware bay, erected in 1827 and 1828, built by Winslow Lewis, at a cost of $30,000; soon after tumbled down, owing to a defective foundation."

This light-house I never saw or had any thing to do with. It was the

work of science, without any practical knowledge. It was planned and built by a gentleman who stands in high repute as an architect and engineer, (Mr. Strickland, of Philadelphia,) who also planned the Exchange in that city. In building a light-house, he stepped out of the latitude of his experience. It must be obvious that the talents of a professed engineer or architect are not required in building light-houses.

The next named in Mr. P.'s schedule is the light-house at Musquito Inlet, Florida, which, he says, "was erected by Winslow Lewis, in 1835, and undermined by the sea in 1837."

This light-house was built by me in 1835. A competent man was sent by the collector of St. Augustine to fix the site on high ground. We were informed the sea had made no inroads on its shores within the recollection of any of the inhabitants. This light-house was never lighted, owing to the Indian war. In the memorable gale the fall after it was built, which swept the whole Florida coast, this hill was swept wholly down by the sea and uncommon rise of water.

The next named by Mr. P. "is St. John's light-house, Florida, built by Winslow Lewis, 1831."

Here is an instance that no human knowledge could foresee or guard against. I built this light-house in 1829. Three persons, best acquainted with the shores at the entrance of the river, accompanied by all the pilots, selected the site. It was located as far back from the shore as the land would admit. In 1831 a sand bar formed on the opposite side of the river, which turned the force of the current on the side on which the light was, and it began rapidly to cut away the shore.

In 1833, the light-house was undermined, and so rapidly was the beach taken away by the current coming down the river, that when I rebuilt the light-house, in 1834, there was 10 feet water where the former light-house stood.

The next in Mr. P.'s schedule is "Southwest Pass, Mississippi, erected in 1831, by Winslow Lewis, on a foundation of old flat-boat plank; undermined and tumbled into the river in 1835."

Then comes "South Pass, Mississippi, erected in 1831, by Winslow Lewis, on a foundation of old flat-boat plank; keeper's house destroyed by the sea in 1840, and the tower will have to be rebuilt."

I gave the plan of the foundation and tower of those two light-houses. The walls of the towers were to be built on four circular rows of large piles, driven down 40 feet, within one foot of each other. Had the foundations been so constructed, if all the land within two miles of it had been washed away, the towers would have stood uninjured. I became the contractor for building those light-houses, went to the expense of sending from here all the piles and timber for the foundations, agreeably to the plan I had given, and sent out competent men to do the work. The superintendent, Mr. Gordon, then collector at New Orleans, took upon himself the responsibility to forbid piles being driven, and ordered the foundation to be made by laying down large square timber. This alteration in the plan of the foundation caused the destruction of the light-houses. What Mr. P. says about the foundation being old flat-boat plank is a mistake in toto.

The next named by Mr. P. is Mahon's Ditch, which he says "was erected in 1831, by Winslow Lewis, at a cost of $9,950; rebuilt in 1839, cost unknown.

It was thought so difficult to get a foundation for a light-house at this

place, that Congress had appropriated for it $17,000. No one offered to build it for that. I afterwards went there, by the request of the Fifth Auditor, and examined the place, made an offer to build a light-house there on the plan I gave, and warrant the solidity of the foundation, for something less than $6,000; which offer was accepted, and the light-house was built on a foundation that would have supported five times its weight. In 1839, it was found necessary to wharf out the creek in front of the light-house, or move it further back on the marsh. It was thought most expedient to do the latter. The light-house was taken down and rebuilt, on a similar foundation, 500 feet further back from the creek.

The next in Mr. P.'s schedule, where my name is mentioned, is Roanake Marshes. He says it was "erected in 1831, by Winslow Lewis, and abandoned in 1839, as uninhabitable. Original cost, $4,784."

This light-house I never saw, or had any thing to do with. The contractor was a Mr. Lyon, afterwards a Delegate in Congress from Michigan, and I believe since a Senator. Yet Mr. P. says the schedule was taken from public documents!

Cumberland Island light-house, Mr. P. says, was built by "Winslow Lewis, in 1820; rebuilt by him in 1838."

There is now no light-house on Great Cumberland Island. A light-house was required for vessels bound into the river St. Mary's. Amelia Island was the proper location for it, but belonging at that time to the Spanish Government, it was erected on Cumberland Island. The Floridas having since been ceded to the United States, this light-house, in 1838, was taken down and rebuilt on Amelia Island, the proper location for it.

The next in Mr. P.'s schedule is St. Mark's light-house: He says "it was erected in 1831, by Winslow Lewis; reported by Captain Rosseau, in 1838, as in a ruinous state."

The site of this light-house was examined by the superintendent and others before it was built, who reported to the Fifth Auditor that it was sandy, similar to Mobile Point; consequently no piles were thought necessary for the security of the foundation. In time it was found that Ocillon Point, on which the light-house stands, was, in some past age, a marsh, which, in time, the sand had washed over to the depth of several feet. The light-house has been recently taken down, removed further back from the shore, and rebuilt on a solid pile foundation.

The next named by Mr. P. is Ocracoke light-house, which, he says, "was erected by Winslow Lewis, in 1823, and rebuilt in 1829, at the cost of $11,154."

I neither planned nor built this light-house, or had any thing to do with it, and never saw it until some time after it was built. He says it was rebuilt in 1829. I venture to assert that it never was rebuilt, and that the original tower is now standing, a solid piece of masonry. Yet Mr. P. states that he prepared the schedule from public documents. It seems to me that this could not have been the case, or there would not have been so many errors, both in the cost and by whom the lights were erected.

Mr. P. says: "Mr. Chairman: I will tell you the cause of these disasters. There never has been connected with the light-house establishment a single officer or attaché of any kind who could lay the slightest claim to a knowledge of architecture or engineering, nor one capable of selecting a site for a light-house, except in the improvements introduced in Boston and Truro lights."

Here, sir, I must be guilty of egotism. I believe I am endowed with common capacity in intellect; I have been constantly engaged for 33 years in using my endeavors to improve the lights on our coast; 31 years since I produced a light in Boston light-house, which reduced the expenditure in oil 75 per cent., and the light could be seen distinctly at the distance of 30 miles. Documents on the files of Congress will substantiate this. No light in this or any other country has been produced which could be seen at a greater distance. I have built 80 light-houses; some of them on every part of our extended coast; on every kind of site, from the solid rock to the alluvial made land, on which no solid bottom could be found at the depth of 60 feet; some in the most exposed situations on the coast. I have built the breakwaters for the security of the light-houses on North Island, South Carolina, Pamlico Point, North Carolina, Long Point, Provincetown, and the extensive work round the light-house at Cape Henlopen, in the Delaware. I built the beacons on Deer Island Point, Boston harbor, and Romer shoal, New York bay; gave the plan for the large light-house on Robbins's reef, near New York, and the beacon on Bowditch's ledge, Salem; all of which are now standing, and have answered the purpose for which they were designed. And at this time you are told, on the floor of Congress, that there never was a single officer or attaché connected with the light-house establishment, who had the slightest claim to any knowledge of architecture or engineering, or one capable of selecting a site for a light-house, except in the improvements made in Boston and Truro lights. What are those improvements? In Boston light-house a new lantern, glazed with plate glass—14 reflectors, placed on two sides of an oblong square, in the same manner as they were placed by me in the same light-house 31 years ago. At the light-house at Truro, a new lantern of cast iron was put on, glazed with plate glass—15 or 16 reflectors, placed on two circles, in the same manner as they always had been. The lamps introduced in those two light-houses consume annually each 60 gallons of oil, the least that can be said. The light is no better, and can be seen no further than the lamps and reflectors which I have, within the last two years, put into the light-houses at Isle of Shoals, Cape Henlopen, Cape Henry, Tybee, and several other light-houses, which lamps consume annually only 30 gallons oil each.

Mr. P. alludes to Mr. J. W. P. Lewis as the architect and engineer who made the improvements in Boston and Truro lights.

I am at a loss to know what pretensions Mr. Lewis can have as an architect. The only building ever built, planned by him, is the light-house at Stonington. There it stands; let the public look at it. As an engineer, as far as it relates to light-houses, his whole experience lies in putting new lanterns on Boston, Truro, and three smaller light-houses; and this since 1839.

That some of our light-houses should be undermined by the encroachment of the sea, and have to be taken down and removed further back, is not strange; it is a circumstance they will always be liable to. It is no fault of those who selected the sites or built the light-houses. I have had an opportunity of observing the encroachment of the sea on our whole coast for 30 years, visiting every light-house in the United States once every year for 16 years. Capes, with the ocean on one side, and the rapid current of some river on the other, as Cape Henlopen and Cape Henry, are the most liable to wash away; but your light-houses must be located at those capes, and must not be set too far back from the shore. The shore continuing to recede for a series of years will oblige you to remove some

of your light-houses further back. This cannot be avoided. There are many places, particularly in bays, where light-houses have been built, at which a work might have been constructed at the time to prevent the sites from washing away; but there were no funds for it, the appropriation being barely sufficient to build the light-house and keeper's dwelling.

Fifty years since there were only 10 or 12 light-houses on our coast. They have rapidly increased to 240. Every attention has been paid by the Treasury Department, not only to improve the system, but to improve the light. Great improvements have been made, so much so that the system and the lights are considered more economical, and equal to those of any other country.

The public are satisfied; navigators or shipowners make no complaints; but a single individual (J. W. P. Lewis) comes forward, (one of very limited knowledge of the light-houses or the management of them,) and tells the public that the whole management of the light-houses has been wrong from the beginning; that all who have had the conducting of them, in any way, are and have been ignorant, incompetent men. I will make a few extracts from Mr. P.'s speech:

"Why, sir, it is a well-known fact that the Fifth Auditor relies entirely upon the advice of the contractor (alluding to me, of whom he has no correct information) for all his plans and specifications for new light-houses.

"The cost of constructing and reconstructing this long catalogue of piers, breakwaters, and sea walls, I have been unable to obtain; but the origin of this great expenditure, going to bolster up the wretched works of previous years, will at once be traced to the fact just mentioned—I mean the employment of a contractor (meaning myself) to plan and specify the mode of constructing our light-houses, *without having any knowledge of such works, governed, of course, by his own interest.*"

Here is a direct attack upon my honor and honesty, which, old as I am, should not be said, either in or out of the halls of Congress, by Mr. P. or any one else. Mr. P. adds: "It is of itself sufficient to prove the necessity of some investigation." An investigation is all I ask. I hope the committee will have time to give the subject a thorough one, and to ascertain how far the charges in Mr. P.'s speech may be justified by the facts that may appear.

Mr. P. reads a list of 47 light-houses that have required sea walls, &c., the names of which I have not seen; but leave out the &c., and I will venture to say there is not one-third the number. Mr. P.'s argument is, employ engineers and architects, and every thing will be remedied. No more sites will be injured by extraordinary storms, which sweep away the strongest fabrics that human skill can invent; no more of the extraordinary floods, caused by hurricanes, which overflow the low lands on the Southern coast, and sweep off every thing.

An architect and engineer will prevent all this. There have been but three instances where an engineer or architect has been employed in planning or building a light-house, and all these have failed—the last one, the light-house on Flynn's Knoll, which was planned by an engineer of high standing in the corps. There was more money spent and lost in this instance, without accomplishing the object, than it has cost to rebuild all the light-houses that ever were taken down, or undermined and fell down.

Mr. P. annexes a bill for transferring the management of the light-houses to the Engineer department.

A few years since the attempt was made to have the light-houses under the control of the navy officers. Whichever you may transfer them to, the expenses will be increased more than 50 per cent. Here permit me to say, (and your investigations will prove it,) that take the whole of the light-house establishment, and it has been conducted with the strictest economy, more so than any public expenditure made by Government; and if ever there was a faithful officer, one whose whole object is to improve the establishment, and that with economy, it is the present incumbent of the office of Fifth Auditor. This is justly due him, and your investigations will prove it.

I have extended my remarks, sir, much further than I intended. My feelings have been carried at too great a length, much further, I fear, than you will have time or patience to read; but, by a cursory glance over what I have written, you may glean some information that will go to refute the charges made in Mr. Proffit's speech.

I feel hurt, and that I am an injured man. After spending the most of a long life, exposed to hardships and dangers, in trying to improve the light-houses on our coast, and with conscious zeal and fidelity; that, after the services of more than 30 years, I should receive as my reward, on the floor of Congress, charges of dishonor and impotence, is gross injustice. I trust I have some friends in Congress to whom I am known, who will defend my reputation; and I have the consolation to know that the subject is before a committee who will do me that justice I feel conscious I am entitled to.

I notice, in Mr. Proffit's remarks relating to light-houses and beacons falling down, that he is silent on the large sum that was expended in the attempt to build a light-house on Flynn's Knoll, for the want of practical knowledge of the effects of the sea. This was the work of a United States engineer, who had been long in the service, and of high repute.

I am, sir, with great respect, your obedient servant,

WINSLOW LEWIS.

Hon. ROBERT C. WINTHROP,
M. C., Washington.